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PUBLICATIONS IN ARCHAEOLOGY

CANNON RESERVOIR HUMAN ECOLOGY PROJECT

Michael J. O'Brien, Editor

Volume 1

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EURO-AMERICAN PIONEER SETTLEMENT SYSTEMS IN THE CENTRAL SALT RIVER VALLEY OF NORTHEAST MISSOURI

by
Roger D. Mason

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American Archaeology Division
Department of Anthropology
University of Missouri-Columbia
Number 2
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AN INTRODUCTION TO THE SERIES AND TO VOLUME 1

With this monograph, the University of Missouri Department of Anthropology-American Archaeology Division begins publication of a series of volumes dealing with select aspects of the Cannon Reservoir Human Ecology Project. The volumes, which will be published as time and money permit, will provide results of the joint University of Nebraska-University of Missouri interdisciplinary project in the Salt River valley of northeast Missouri.

The Cannon Project, sponsored by the U.S. Army Corps of Engineers, was formed in 1977 to investigate processes of ecological adaptation and change in the central portion of the Salt Valley. Specifically, the project focused on isolating significant cultural patterns and processes as reflected in material remains and extant historical documents. Prehistoric and historic (nineteenth century) occupations of the region were of equal interest, and complementary data recovery techniques were used to address problems common to both spheres. As we have emphasized many times, the research conducted by the Cannon Project bears not only on the Holocene human ecology of the central Salt River valley, but on a broader scale, to a balanced understanding of cultural development in the greater Midwest. At an even higher level, our conclusions should be useful for refining general anthropological theory regarding human responses to a range of cultural and natural stimuli.

The Salt River valley proved to be an excellent laboratory in which to test various assumptions concerning man's adaptation to these stimuli. The 1168 km² project area is located along the southern fringe of the midcontinental Prairie Peninsula, a region characterized as a complex mosaic of prairie and forest biomes. The area was sensitive to climatic change throughout the Holocene—a sensitivity that caused myriad adjustments by human populations. As we have documented elsewhere (O'Brien *et al.* 1982), many of these adjustments—as well as many elements of stability—are reflected in the archaeological record.

For the early nineteenth century—the period during which the project area was colonized by westward-moving Euro-American groups—clues as to the types and magnitudes of these adjustments are preserved in historical documents as well as in the archaeological record. From the initial stages of the Cannon Project, we concluded that to understand the dynamics behind the Euro-American settlement of the Salt River valley, our

historical archaeological efforts would have to be bolstered by a thorough documentation of both the persons involved in the settlement and the patterns in which they distributed themselves across the landscape. While some information relative to this documentation could be generated through conventional archaeological survey and a cursory examination of land records, these methods were inadequate for producing the kinds of data needed to make logical inferences concerning the processes of settlement. Rather, field survey and land ownership information had to be linked to literally scores of other types of archival and documentary information to produce the kind of data base within which the archaeological data could be placed. After five years' work, Roger Mason has produced such a data base.

In this monograph, Mason defines the central Salt River valley as an integral part of an upper South agricultural-economic system of the early and mid-nineteenth century. In establishing the Bluegrass region of Kentucky as an important emigration field of the early colonists, Mason notes the similarities in environmental perceptions between settlers of the two areas and, not unexpectedly, similarities in agricultural production methods. Two important aspects of his work are his documentation of early town and road network development and his analysis of decision-making strategies relative to land purchase. The study of land perceptions and locational strategies of colonists of the Midwest has been, and probably will continue to be, a "hot" topic among cultural geographers. Mason's contribution to this issue is important because his analysis was quantitative, i.e., individual land units were classified according to attributes of several physical environmental dimensions of the biotope, and his study area was large enough to cover large sections of the deciduous forest and grassland biomes.

Mason's model of colonial settlement and spread also includes social factors such as kinship and religious affiliation. His study has laid the groundwork for a more intensive investigation of the relationships among colonizing families, in which various Kentucky county records and family histories were searched in an effort to compile genealogical data on as many families as possible. What has emerged from these analyses is a picture of large kin-based networks, established during the late eighteenth and early nineteenth centuries in the Bluegrass region, immigrating to the central Salt River valley

during the 1820s and 1830s. Individual families within each kin-based group tended to settle near one another in the frontier, and in many instances apparently functioned as corporate work groups.

As opposed to the Turnerian notion of the rise of democracy in the frontier, the success of these groups in transplanting their cultural traditions and their successes

and failures in attaining social prominence with this transplanted society is the real story behind westward frontier expansion. Mason tells this story extremely well. Future research in the dynamics of frontier colonization in the Midwest should draw heavily from the ideas presented in this volume.

PREFACE

Work reported here was carried out as part of the Cannon Reservoir Human Ecology Project, funded by the U.S. Army Corps of Engineers, St. Louis District. The purpose of the project was to mitigate damage to archaeological and historical cultural resources in the area to be inundated by the Clarence Cannon Dam and Reservoir on the Salt River in northeast Missouri. Documentary research on historical period settlement in the area originally was planned to supplement excavation of nineteenth-century farmsteads by providing information on the inhabitants of those farmsteads. However, preliminary investigation of federal public land sales and nineteenth-century agriculture in the area by Richard Bremer (1975) indicated the potential for a detailed reconstruction and analysis of the frontier settlement system employing documentary sources. Archaeological objectives, such as defining settlement patterns and understanding settlement systems, were to be reached by employing data that usually has been considered to be the domain of historians and historical geographers.

I would like to thank Michael J. O'Brien, project director, for the opportunity to discover that it is possible to get one's hands just as dirty among the

ancient dusty tomes as in "dirt" archaeology. I benefited from discussing problems encountered during research and writing with O'Brien and Dennis E. Lewarch, assistant director. I was assisted during the data collection phase by Cynthia Wood, Tom Miskell, and Jacqueline Saunders. I thank Robert E. Warren for discussing his work dealing with the nineteenth-century environment.

Research among the county records was facilitated by many helpful and friendly officials and staff of the Ralls and Monroe County courthouses. I am particularly grateful to Frances Ross, recorder for Ralls County, and to Oscar Tawney, recorder for Monroe County, for providing me with space to work in their vaults.

Creation of the computer data files and the master SIR (Scientific Information Retrieval) file was carried out by Steven C. Willis. He also carried out the retrievals used to create most tables in Chapters 4 and 5. The multiple regression and discriminant analysis procedures described in Chapter 4 were performed by R. Duncan Mitchell. All figures were drafted by Susan J. Vale.

INTRODUCTION

The Salt River area of northeast Missouri was settled by Euro-Americans during the period 1818-1850. This frontier period in the history of the central Salt River region is the subject of this study. Since this study was carried out as part of a larger archaeological research project, the Cannon Reservoir Human Ecology Project, research objectives and data analysis were more archaeological than historical. The present study has been particularly influenced by archaeological settlement pattern studies (Parsons 1972). Settlement pattern studies in archaeology seek to define the spatial relationships of contemporary sites in terms of the physical and cultural environment. Settlement patterns become settlement systems when information about site function is added (Winters 1969:110).

The goal of understanding settlement systems in archaeology requires that data be collected in the same manner from all parts of each site so that (a) quantitative comparison of data from different sites can be carried out (Mason 1979), and (b) the full range of site variability can be determined. Quantitative data that provide similar information about the members of each household in the central Salt River area for the period 1818-1850 are available from documentary sources, such as land purchase records and manuscript census schedules. Land purchase records contribute spatial information necessary to reconstruct settlement patterns. Spatial information, when combined with data on the environment, allows study of the environmental zones preferred by pioneer agriculturists. Data from the censuses, supplemented by other sources, provide functional information on occupations, agriculture, and wealth differences necessary to reconstruct the settlement system. The ultimate goal is explaining processes involved in the development of the system. Although much of this report is concerned with analysis of settlement patterns (Chapter 4) and settlement systems (Chapter 5), it is useful to understand the historical and cultural contexts of the region being studied. Therefore, Chapter 2 consists of a narrative historical account of regional development and Chapter 3 provides information on the cultural background and demographic characteristics of the population of the region.

Data were collected for all households within a region of 544.2 mi² (1409.5 km²) centered around the area to be inundated by the Clarence Cannon Reservoir. The project area (Figure 1) includes land in three northeast Missouri

counties: Ralls, Monroe, and Shelby. The project area is slightly larger than the area encompassed by the regional survey of the Cannon Reservoir Human Ecology Project (O'Brien *et al.* 1982; Warren 1976, 1979). Additions to the survey area were made to form complete congressional townships and to incorporate more of the timber-prairie boundary, an important ecological zone for pioneer agriculturists.

APPROACHES TO THE STUDY OF THE AMERICAN FRONTIER

Before discussing specific hypotheses and methods of analysis, a brief review of approaches and methods employed by historians, geographers, and archaeologists in studying the American frontier is presented. It will be shown that significant differences exist in the way frontiers have been studied by these disciplines, especially in the degree to which quantitative data have been employed. More important, however, are the different kinds of problems addressed by the various disciplines.

The study of frontiers and "the West" has been, until recently, a subject primarily for historians, beginning with Frederick Jackson Turner (1893) in the 1890s. Subsequently, most historians of the American frontier have found themselves either defending or attacking the Turner thesis (discussed below). More recently, historical geographers have entered the field, discussing frontier development of regions in terms of spatial context. A few models of spatial patterns of frontier settlement have been proposed by more theoretically inclined settlement geographers. Archaeologists have traditionally concentrated on prehistoric, non-Western cultures, but the recent development of historical archaeology has increased their interest in the American frontier (Lewis 1977). As discussed above, the present study is most closely related to archaeological settlement pattern studies, although the data are derived from documents rather than from artifacts.

Historians and Frontier Studies

Data employed by historians usually consist of narra-

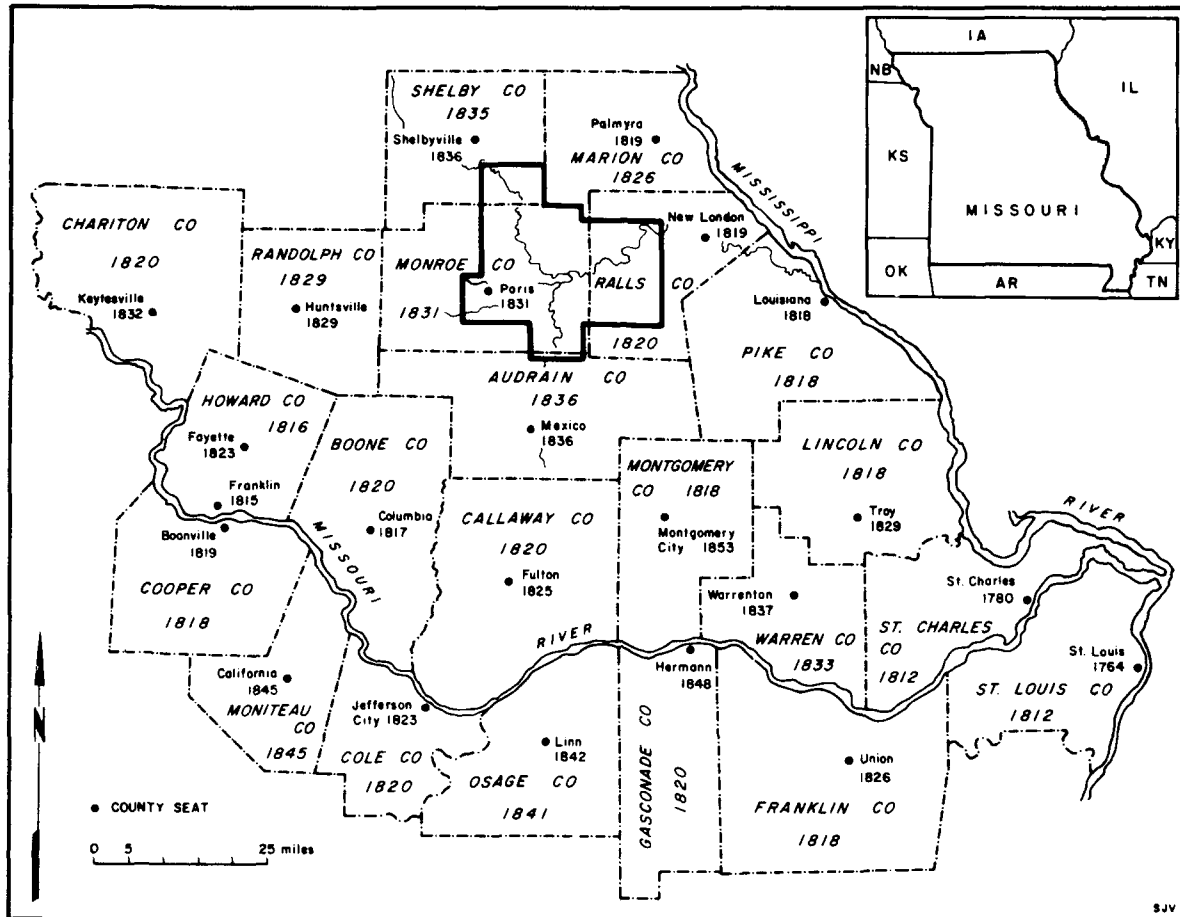


Figure 1. Map of northeastern Missouri, showing the project area, locations of counties and county seats, and dates of county formation.

tive accounts that are interpreted subjectively—being influenced by the social and intellectual climate of the times—as Horsman (1978) demonstrates for historical studies of federal public land policies. Although some historians employ quantitative data (Curti 1959; Okada 1971), the questions they ask tend to be philosophical, such as: “Were land speculators good or bad?” or, “Did frontier conditions promote democracy?” Such questions cannot be answered objectively, no matter how many quantitative data are employed. Thus, conclusions tend to be a product of the educational background and philosophical predilections of the investigator, rather than a result of objective data analysis.

Studies of public land policy by historians demonstrate the tendencies discussed above (Horsman 1978). For example, in Turner’s original formulation, United States public land policy was seen as beneficial, since the availability of inexpensive land promoted development of a democratic system based on many land-owning

yeoman farmers. This view was challenged first by Gates (1931, 1941, 1942, 1945), who believed the public land system encouraged land speculation, absentee ownership, and tenancy, and retarded frontier development. More recently, Bogue (1963), Swierenga (1968), and others interested in economic history have judged land speculators in terms of their contribution to local economic growth, primarily as providers of credit.

Although the question of whether public land policy was good or bad is a philosophical one, effects of this policy in various regions can be examined objectively, taking into account different economic and social conditions. Overall evaluation of the policy then can become a sampling problem, so that comparable quantitative studies can be carried out in each region where variables such as time of settlement, economic conditions, external transportation links, and settler characteristics can be controlled. Historians have not carried out such a program of investigation, preferring to generalize from

particularistic, noncomparable research. Horsman (1978:80) notes a need for "in depth studies of limited areas across economic, social, and political concerns," echoing Swierenga's (1973:111-112) plea for a "new rural history" that would integrate ecological, demographic, behavioral, economic, and institutional approaches, leading to a "coherent, general framework for an overall history of rural development in America."

Geographers and Frontier Studies

It appears that historical geographers have come closer to achieving an integrated synthesis of frontier processes, discussing functional relationships of environment, agricultural technology, cultural background, social differentiation, and economic specialization. The two most notable works of this kind are Lemon's (1972) study of colonial southeast Pennsylvania and Mitchell's (1972b, 1977) research concerning settlement and development of the Shenandoah Valley in Virginia. Studies of colonial North Carolina (Merrens 1964), Massachusetts (Greven 1970), and Nova Scotia (Clark 1968) also have been carried out. These works attempt regional syntheses based both on narrative sources (diaries, letters, newspapers, and traveler's accounts) and an unsystematic sampling of quantitative data (tax lists, probate records, land sales, and censuses). However, results are not verifiable by others, since no basic data are presented. Conclusions tend to be normative; that is, certain traits, adaptations, or processes are said to characterize the region as a whole and the range of variation is not specified.

Many historical geographers have confined themselves to the colonial period east of the Appalachians, where reliable quantitative data on regional populations are not available. These types of data are available for Midwestern frontiers, however, in the form of manuscript census data and records of public land sales, along with tax assessments and probate records. One of the few geographers to make use of this kind of data is Conzen (1971), who studied a township (36 mi²) adjacent to Madison, Wisconsin. Conzen was interested primarily in investigating effects of proximity to an urban center on the development of agriculture in the township, but he also considered the effects of social and cultural factors on economic development. However, the small area studied, as well as peculiar local historical variables (such as absentee speculation in land adjacent to a future state capital), make it difficult to use Conzen's work to generate a model capable of being tested in other areas.

Settlement geography also can contribute to an understanding of frontier settlement systems. Settlement geography has been defined as "the study of the form of the cultural landscape, involving its orderly

description and attempted explanation" (Jordan 1966:27). Settlement geography deals with "(i) the facilities built in the process of human occupancy of the land and (ii) their grouping" in relation to culture and environment (Singh 1975:4). Unfortunately, settlement geography has been concerned primarily with describing the distribution of facilities (farmsteads, hamlets, villages, towns) by such terms as random, regular, or clustered. Research has concentrated on formulating mathematical expressions for these distributions, as indicated by a recent collection of readings on rural settlement geography (Singh and Singh 1975). More theoretical work designed to explain processes that create these distributions, especially at the rural level, is lacking.

One of the few attempts to describe the genesis of rural settlement patterns was carried out by Hudson (1969), who proposed three phases of rural settlement development: colonization, spread, and competition. In Hudson's model, colonization is defined as long-distance diffusion or migration, while spread is defined as short-distance diffusion or "budding off." The last phase, competition, is a result of increasing population density and, as minimum viable farm size is approached, spacing between farmsteads becomes more regular. Hudson investigated the competition phase in Iowa by using late nineteenth- and twentieth-century county atlases to determine farmstead location, and found evidence for increasingly regular spacing of farmsteads over time. It should be noted that Hudson did not test the first two phases against empirical data, and that the third phase, competition, was tested in Iowa during the period of transition to mechanized agriculture, a factor not discussed by Hudson. The phases of rural settlement proposed by Hudson may operate under ideal conditions, such as uniform topography and freely competing individual farmers, but should not be seen as universally applicable since more complex environmental and social characteristics could cause serious distortions in this ideal pattern. The relevance of Hudson's model for the project area will be discussed in the concluding chapter.

Archaeological Settlement Pattern Studies

Archaeologists have not dealt specifically with the problems of the American frontier to any great extent (an exception is Lewis 1977), but the objectives and methods of archaeological settlement pattern studies are relevant to the problem at hand. The study of settlement patterns in archaeology is well developed (Parsons 1972) and some progress is being made toward understanding settlement systems. Winters (1969:110) distinguishes between settlement patterns and settlement systems: Settlement pattern is defined as "the geographic and physiographic relationships of a contemporaneous group of sites within a single culture," while settlement system

"refers to the functional relationships among the sites contained within the settlement pattern." While these concepts were formulated by Winters to deal with mobile hunter-gatherers, Parsons (1974:83) applied them to sedentary agriculturists as well:

The function of occupational loci must be determined . . . Unless we can determine when a site was occupied, what was the age-sex-status composition of its inhabitants, and what activities were being performed there, we can never hope to understand either the settlement system, the role of the particular site within the settlement system, or the number of people involved in the settlement system.

Thus, in order to investigate settlement systems (functional interrelationships) of sites, farmsteads, or hamlets and villages, it is necessary to establish contemporaneity, determine demographic characteristics of the population, and investigate the distribution of statuses and activities among individuals or households. For rural nineteenth-century America, this would include a study of social stratification, occupational specialization, and exchange systems.

Reconstruction of the pioneer settlement system of the project area requires compilation of comparable quantitative data on all households so that propositions about functional relationships can be tested against the entire range of empirical variability. Rather than attempting to gather this data archaeologically, data was gathered from contemporary written records generated by local and federal government agencies.

HYPOTHESES

Archaeological methods emphasize the testing of propositions or hypotheses against empirical data. In this section, brief reviews of the historical and geographical literature pertaining to specific problems in frontier studies are presented. Following each review, hypotheses that summarize propositions about frontier characteristics are presented. In later chapters these hypotheses are tested against empirical data from the project area. In the concluding chapter an attempt is made to discuss some of the functional relationships among the propositions about frontier characteristics that were supported by the data.

Hypotheses to be tested can be grouped into several broad categories. The first group of hypotheses deals with decisions made by settlers about the location of land to be purchased. These hypotheses are tested in Chapter 4. A second set of hypotheses, tested in Chapter 5, deals with economic development of the area, concentrating on degree of participation in external markets. A final set of hypotheses concerns degree of social stratification

and wealth differences. These hypotheses also are tested in Chapter 5.

Location Decisions

Prospective settlers arriving in the project area had a wide choice of available land that could be purchased at a uniform price of \$1.25/acre (\$2/acre before July 1, 1820). Land ownership patterns were a result of hundreds of individual decisions about land desirability, which were influenced by perception of the landscape based on previous experience, available technology, and cultural background (Brookfield 1969; Mitchell 1972b: 461). Owsley (1949:56) notes that migrants were "not in search of the richest lands of the public domain, but merely the richest of the particular type of land to which they were accustomed." Particularly important variables were climate and tree species, frequently used as a guide to soil fertility (Hulbert 1930:72, 78; Lynch 1943:306).

Environmental zones in the Cannon area tend to be banded by elevation (Warren and O'Brien 1981 and Chapter 4), with timbered bottomlands and terraces located along rivers and streams (some small prairie bottomland areas also occur), timbered slopes and ridgetops at intermediate elevations below timber-prairie slopes, and upland level prairies. Both Jordan (1964) and McManis (1964) have proposed that zones of mixed prairie and forest were preferred settlement locations in Illinois and Indiana. Prairie edges were cultivated more easily than the tough sod of large open prairie areas or completely wooded areas that required laborious clearing. The nearby forest provided construction material and fuel. Access to water also was important and usually was restricted to forested areas. James Flint, an early traveler in the Midwest, indicated a similar pattern of land selection applied to Missouri lands sold in St. Louis in 1819: "The most advantageous purchases are considered to be those on the edge of prairies, with a part of the open land, and a part of the woods" (Flint 1904:130). However, locations of the few remaining houses from the early period of settlement in the project area indicate that timbered moderately sloping areas also were preferred for farmstead locations.

Based on the work cited above and a knowledge of the environmental characteristics of the project area, the following two hypotheses are formulated:

1. First land purchases by individuals will include timbered ridgetops or timbered moderate slopes and prairie edges.
2. Subsequent purchases will include prairie or bottomland for cultivation.

Bohland (1972) proposed four dimensions that determine rural dwelling locations: accessibility, site aesthetics, topographic perception, and social interaction. Topo-

graphic perception already has been considered and site aesthetics cannot be measured, since concepts of beauty held by the settlers are unknown. Social interaction probably produced clustering, especially during the colonization phase proposed by Hudson (1969). Accessibility requirements may have concentrated dwellings near roads and towns. Consideration of the factors of social interaction and accessibility leads to the following hypotheses:

3. Initial settlement was composed of discrete clusters of related families with common religious affiliation.
4. Settlement density was higher near roads and towns.

Economic Development

Turner's characterization of the frontier as "a return to primitive conditions" with "the simplicity of primitive society" and as "the meeting point between savagery and civilization" (Turner 1937:2-3) while romantic, probably is not very accurate. Frontier residents seldom were self-sufficient and isolated completely (Mitchell 1977:3). Bidwell and Falconer's (1925:165) sweeping generalization that "self-sufficiency was a uniform characteristic of all pioneer settlements west of the Alleghenies from western New York to Missouri" has been challenged by several investigators (Loehr 1952; Hofstadter 1956). Berkhofer (1964:27) believes frontier economic and social systems were more complex than the Turner hypothesis allowed, and that "if a farmer was self-sufficient, it was only because he had no access to market." Mitchell's (1977:4) view is that "commercial tendencies were present from the beginnings of permanent settlement and were the most dynamic element in the emerging pioneer economy." As Berkhofer (1964:25) notes, the cultural values and institutions the pioneers brought with them from the East were more powerful than the frontier environment.

In Mitchell's (1972b:462) discussion of the frontier as a spatial process, he stresses the need to study economic development of frontier areas in terms of agricultural and craft specialization, social differentiation, and degree of participation in the market system. According to Mitchell (1972b:478), developing pioneer economies are characterized by: agricultural crop specialization, diversification of manufacturing and service functions, elaboration of low-order central place tendencies, and greater commercial contacts with Eastern market centers. Mitchell's description of pioneer economies suggests the following hypotheses:

5. Specialization in production for market of crops and livestock developed in the project area by 1850.

6. Specialists in craft production and commercial activities were concentrated in a series of regularly spaced towns.
7. Towns with the greatest number of functions were county seats since they combined administrative and economic functions (Lemon 1967b:517; Voss 1969-1970:65).

Mitchell (1972b:478) has suggested town formation is related to population density, and Davis (1977:138) has presented specific populations required to support various services. This suggests it should be possible to identify a minimum population or population density for town formation, as stated in the following hypothesis:

8. Town formation occurred at some identifiable population threshold.

It is difficult to measure external trade contacts, but they may be indirectly reflected by road construction (Mitchell 1972b:477). If a road network that connected the project area to outside markets was developed soon after initial settlement, it may be concluded that external markets were actively being sought. The following hypothesis tests this:

9. A road network connecting the project area to outside markets was developed within the first ten years after formation of counties.

Social Stratification and Wealth

Status distinctions and social stratification are corollaries of increasing economic complexity. Since status was related largely to land ownership (Berkhofer 1964:27; Lemon 1980:122; Mitchell 1977:238), availability of large amounts of relatively inexpensive land on the frontier tended to create a large middle class (Berkhofer 1964:27). However, since there were landless tenants and artisans, as well as owners of large tracts of land, "status distinctions existed from the outset" in southeastern Pennsylvania (Lemon 1980:122). In Trempeleau County, Wisconsin, a social elite emerged within the first decade of settlement (Curti 1959:107-112). It has been suggested that increasing social stratification occurs in a frontier area as the amount of available land decreases and population density increases, resulting in greater competition for land (Billington 1966:103; Mitchell 1977:132). In the upper South, slave ownership also was a status and wealth indicator (Mitchell 1972b:484; Viles 1920:40), and produced a more class-structured society than in the North (Mitchell 1978:86).

Increasing social stratification is reflected in the share of the total wealth of the region possessed by the wealthiest 10% of the population (Lemon and Nash 1968; Main 1965:276). Main (1965:276) found that, based on colonial tax assessments, this share increased from 33% to 50% as an agricultural region became

more commercially oriented. The above discussion indicates that wealth differences, as reflected in land and slave ownership, should be apparent from the period of initial settlement of the project area and should increase through time, as stated in the following hypothesis:

10. At least 33% of the wealth of rural residents of the project area, as measured by land and slaves, was in the hands of the wealthiest 10% in 1830, reaching 50% by 1850.

Two other variables are related to social stratification: persistence (length of residence in the same place) and political leadership. Malin (1935) studied persistence of settlers in Kansas and found that high rates of turnover were characteristic of the first 2 years of settlement, after which populations became more stable. However, Malin did not correlate persistence with wealth. Curti's (1959:141) study of Trempealeau County, Wisconsin, showed that farmers who had long tenure in the county had higher property, livestock, and crop values. Wealth also was correlated with length of residence in frontier Minnesota (Rice 1977:171). Both studies indicate there is a relationship between wealth and persistence, which leads to the following hypothesis:

11. Wealth will be correlated with the length of residence in the project area.

Billington (1966:103, 110) notes that new leadership positions were available on the frontier, making political leadership available to many who had not been able to attain it in the East. However, Mitchell (1978:86) and Elkins and McKittrick (1954:67) have suggested that in the upper South (of which Missouri was a part), leadership positions usually went to members of the "planter" class (those who owned relatively large amounts of land and slaves). This can be addressed with the following hypothesis:

12. Local political offices were held by wealthier members of the population.

REPORT ORGANIZATION

Before the quantitative data necessary to test the hypotheses discussed above are presented and analyzed in Chapters 4 and 5, a brief history of the project area and adjacent areas is presented in Chapter 2. An outline of early settlement, changing political geography, economic cycles, and town formation is required to place the statistical data into a chronological and regional historical context. This historical summary is necessary so that patterns that are the result of local historical events and politically imposed decisions can be differentiated from patterns resulting from more general economic and social processes, as revealed by statistical analysis. Ori-

gins of settlers, their sociocultural background, and demographic characteristics are summarized in Chapter 3. That chapter provides the cultural context within which decisions made by settlers are analyzed.

Chapter 4 deals with settlement patterns and addresses temporal and spatial patterning in federal public land sales. Temporal patterns are analyzed in terms of changing land laws and economic conditions. Spatial patterns are analyzed in terms of decisions made by individual purchasers, conditioned by their perception of the environmental variation in the project area. A multiple regression technique is employed to determine which combinations of environmental variables were preferred, assuming date of purchase reflects land desirability. Spatial patterning in relation to social variables such as kinship also is considered.

Chapter 5 presents data on socioeconomic differentiation.¹ The distribution of agricultural and nonagricultural specialization is discussed in relation to town formation and road development. Social stratification is studied in terms of the distribution of wealth (in the form of land and slaves) among the population and is related to persistence (length of residence in the project area) and political office-holding. Chapter 6 synthesizes results of the preceding chapters, describes the pre-180 settlement system of the project area, and identifies some of the processes that created it.

SOURCES OF DATA

Research involved compiling and coding material from documentary sources. The two primary sources employed were land purchase data, mostly consisting of entries of federal public land, and census data. These data were supplemented by residence data from patents (federal deeds), poll books, and probate records. Environmental data were derived primarily from soil maps.

Land Entry Data

During the first phase of research a file of all original land entries (purchases of land from the federal government) in the project area was created. All land in the project area was originally federal public land that was first offered for sale in 1818 and 1819 (except certain

¹Data on federal public land sales were collected for the entire project area but data on socioeconomic differentiation presented in Chapter 5 were not collected from Shelby County.

tracts designated as school and swamp lands that were ceded to the state; see Chapter 4). Sales continued until the last piece of federal public land was sold in 1859.

Land entry data are found in plat books of original entries kept in the office of the recorder of deeds in each county courthouse. Each page of the plat book presents in map form the name of entrant and date of entry for a congressional township of 36 sections (36 mi²). Since Shelby County does not have an original entry plat book, land entry data were compiled from records available at the state archives in Jefferson City. Land entry data were transferred to index cards, one card for each section. Name of entrant and date of entry were recorded for each of the 16 quarter-quarter sections in each section. Each quarter-quarter section was given a numeric code, replacing the more cumbersome legal description and facilitating computer manipulation.

Patents

A second phase of research involved a search for copies of patents corresponding to original land entries. Patents were issued as deeds from the federal government for public land entries. Copies of patents are found interspersed through deed books in the recorder's office, but can be located through the index to deeds. Patent information was entered in a card file of original entries organized alphabetically by name of entrant. At least one patent was found for 1041 of the 1548 original entrants in the area.

Patents verify that the entrant became the actual owner of the land and list county of residence for the entrant at the time of entry. For almost all land units in the project area for which a copy of a patent was available, the original entrant became the patentee. Only 15 original entrants assigned part or all of their land to someone else before the patent was issued. Some of these involved entrants who died and assigned the land to an heir. In most cases, the county of residence given on the patents was one of the three counties in the project area: Ralls, Monroe, and Shelby. This indicates that the entrant was a resident of the area or intended to become one. However, nonlocal counties are given as places of residence for 273 of the 1041 entrants for which at least one patent is available. These nonlocal patent residences allow identification of points of origin of immigrants to the area (if it can be shown that they became residents of the project area) and help identify Eastern land speculators.

Census Data

The third major source of data employed was the

manuscript schedules of the federal censuses for the years 1830, 1840, and 1850. Schedules for the 1820 census of Missouri are not available. Microfilm copies of the forms completed by census enumerators are on file at the State Historical Society of Missouri in Columbia (originals are in the National Archives). Information available increases in each census. The 1830 census lists the names of heads of household and the number of household members by sex and age groups, as well as the number of slaves by sex and age groups. The 1840 census lists similar information plus the number of persons engaged in agriculture, commerce, or manufacturing; "learned persons" in each household also are identified. It appears that these numbers include slaves. In 1850, the names of each household member are given along with their exact ages, occupation, state of birth, and value of real estate owned. There also are separate schedules for slaves, products of agriculture, and products of industry. Data from the census were entered on the file card of each land entrant and were coded for creation of a master computer file.

Another computer file was created for the products of agriculture schedule, which includes most farmers in the project area, not simply those who were land entrants. The products of agriculture schedule contains information on the value of farms, number of improved and unimproved acres, livestock, and crop yields for each farm which produced over \$100 worth of commodities (Wright and Hunt 1900:23) during the previous year (1849-1850). It should be noted that the population schedule lists the value of land owned by the individual, while the agricultural schedule lists the value of the land farmed by the individual. Thus, if an individual is shown in the population census as owning no land, but appears in the agricultural census, it is assumed he was a tenant.

Since boundaries of the project area do not correspond to local political boundaries (counties and political townships), it is difficult to use the census information to determine the population of the project area. The censuses in 1830 and 1840 were taken by townships, but in 1850 the smallest unit of enumeration was the entire county. Since certain townships fall almost completely within the project area, and most residents also were original entrants during the first years of settlement, the problem is not as great for 1830 and 1840 as it is for 1850. For 1830 and 1840, lists of all persons in townships falling within, or mostly within, the project area were made, whether or not they were original entrants. For 1850, it is assumed that (a) the order of appearance in the census schedule represents the route of the census enumerator and (b) people listed close together in the census schedule lived near each other (this was tested for known locations of some original entrants and appears to be a valid assumption; see Conzen 1971, Appendix B

for an example). Presence in the census schedule of original entrants was used as an indication that people appearing near them in the schedule also lived within the project area. As a rule, if more than four consecutive names were not original entrants, they were assumed to have lived outside the project area. Data on occupations, value of real estate, and the number of slaves owned for nonentrants assumed to have lived within the project area were added to a published list of names and ages from the 1850 censuses of Monroe and Ralls counties (Ellsberry n.d. a, b).

Supplementary Data

As a supplement to census information, data from poll books, probate records, and the patent residence information discussed above, were added to the census file. Since no census information was available for the period before 1830, Ralls County poll books for the years 1822, 1824, 1826, and 1828 (located in the vault of the Ralls County clerk) were consulted. Poll books of Spencer Township exist for 1824, 1826, and 1828; for Salt River Township for 1822, 1826, and 1828; for Union Township for 1822, 1824, 1826, and 1828; and for Jackson Township (which was created after 1826) for 1828. Most of the project area fell within these Ralls County townships during the 1820s (Figure 2). By using the poll books, it could be determined how soon before 1830 some original entrants became residents of the area. The poll books also are useful in identifying residents who did not remain until the 1830 census was taken. Dates of death for residents were determined from probate records and aided in identifying as residents those persons who arrived between censuses and who died before the next census was taken. This information also was useful in studying persistence since, in many cases, failure to appear in a succeeding census could be attributed to death rather than to emigration.

Other documentary sources that were employed, but not coded for computer use, include county road records and marriage records. The Monroe County road records are part of the minutes of the county court, while the Ralls County road records are found in separate volumes. Besides allowing a tentative reconstruction of the early county road system, they also mention early settlements, local landmarks, and house locations. County marriage records are useful in determining religious affiliation of some families if the marriage was performed by a minister of a certain denomination. Unfortunately, the majority of early marriages were performed by justices of the peace. Catholics are identified most consistently since they usually were married by a priest.

Writs of *Ad Quod Damnum*

A documentary source useful for determining locations of water-powered grist and saw mills is the writ of *ad quod damnum*, found in the circuit court records of each county. According to a law passed by the state General Assembly on December 3, 1822, anyone who wished to build a dam on a river or stream had to file a petition with the circuit court for a writ of *ad quod damnum*. Upon receipt of the petition, the court appointed a jury of 12 men to visit the site of the proposed dam and to determine whether any damage would result "by the overflowing of the banks and bottoms to houses, outhouses, corn tillages, or gardens," or whether "the health of the neighbors or the passage of fish and ordinary navigation" would "be annoyed by the erection of a dam" (MCCCR Box 1:1).² If the report of the jury was favorable, a writ was issued allowing construction of the dam. These early environmental impact statements allow determination of locations of proposed mills, but further research among deed records and other sources is required to verify that the mill actually was built.

Environmental Variables

Environmental variables for correlation with the land entry data were derived from soil series descriptions from the U.S. Soil Conservation Service (Watson 1979 and unpublished data). Soil series descriptions contain information on slope, topographic features, native vegetation, and drainage, (i.e., variables that may have influenced prospective purchasers' decisions about what land to buy). A computer file containing information on the distribution of soil series in the project area was created from soil maps (Watson 1979 and unpublished data) by estimating the number of sixteenths of a quarter-quarter section that was occupied by each soil series. Thus, each quarter-quarter section was listed by location and each soil series present in each was listed and given a number from 1 to 16 to represent the quantity of the soil series in that quarter-quarter section.

PROCEDURES

Once the files were completed, all names in the land entry file, the population census file, and the 1850

²Abbreviations for references to county records are on pp. 98-9.

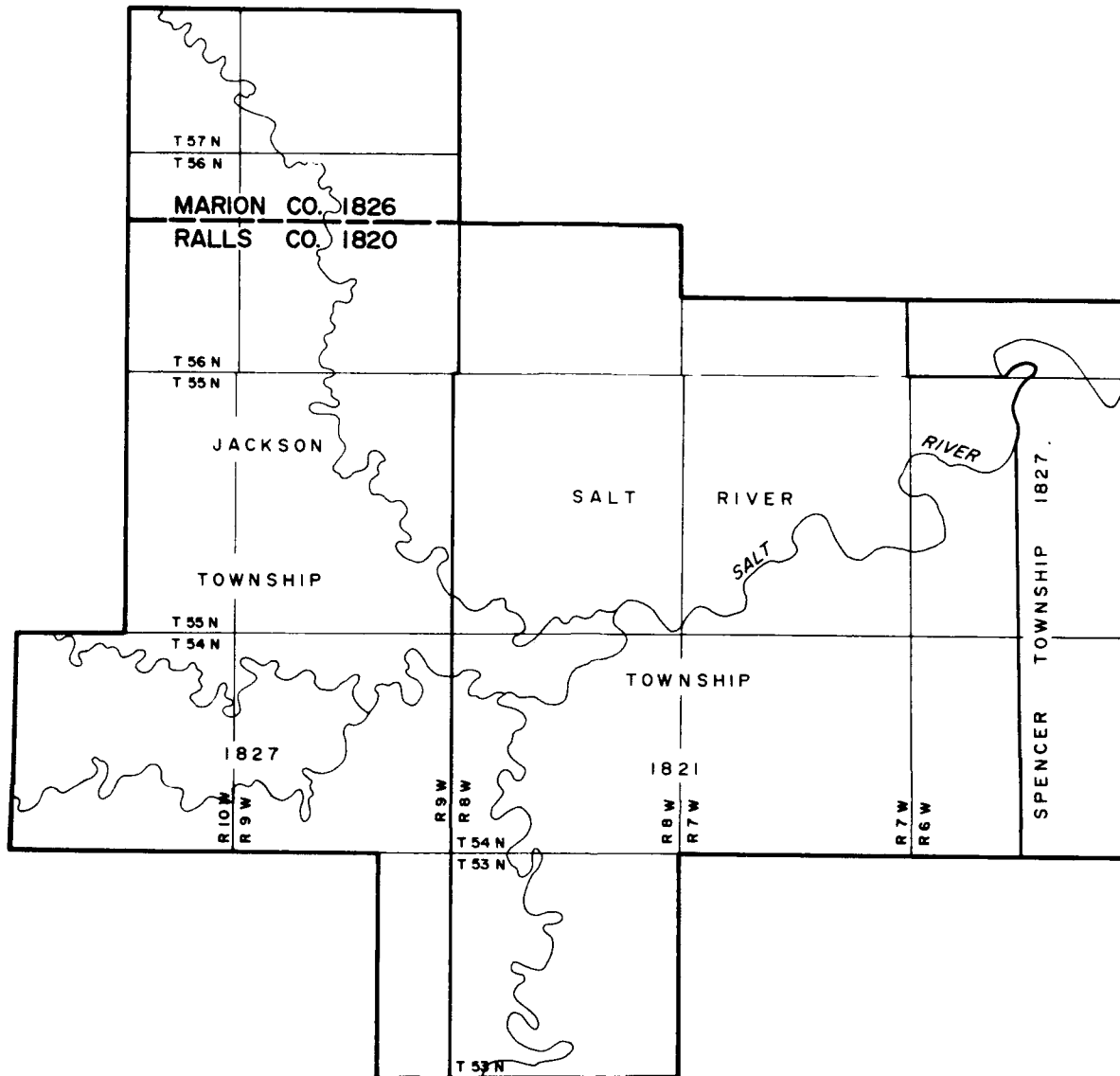


Figure 2. Map showing local political boundaries (counties and townships) in 1830, with dates for formation.

agricultural census file were cross-checked for variations in spelling and use of middle initials. If it was determined that the same person was being referred to (by checking age, land purchase location, etc.), a standard form for the person's name was chosen and used in all files. The problem of different individuals with the same name occurred frequently since it was usual to name one of a family's sons after his father or grandfather, sometimes changing the middle name. This causes confusion if the middle initial or the designations "Jr." and "Sr." were not used. There also were several cases of men with the same names whose difference in ages was not

great enough for them to have been father and son, but who used junior and senior designations to distinguish themselves. The most confusing group was the Smiths, some of whom were among the earliest settlers of the area. For example, there were three James H. Smiths, three Ephraim Smiths, and two Joseph Smiths.

Once cross-checking was completed, the land purchase file, the population census, the agricultural census, and the soil series files were merged into a master file using the Scientific Information Retrieval system (SIR). SIR retrievals that produced data for tables in Chapters 4 and 5 were carried out by Stephen C. Willis using the

University of Washington CDC-6400 computer system.

A final procedure carried out prior to data analysis was sorting all land entrants into three populations: residents, Eastern speculators, and nonresidents. A person was defined as a resident if he met any one of the following criteria: (a) was listed in any population census, (b) had a local county (Ralls, Monroe, or Shelby) listed as place of residence on a patent, (c) appeared in any of the 1820s Ralls County poll books, or (d) was listed in the 1821-1850 probate records as dying in Ralls or Monroe County. A person was defined as an Eastern speculator if he had not been defined

already as a resident and had a patent residence listed in one of the following states: Pennsylvania, New Jersey, New York, or Connecticut. Since almost all land entries by people in this group were made on only eight days in 1835 and 1836, people who were not residents and for whom no patent was found, but who made large purchases on these days, were also classified as Eastern speculators. The nonresident category includes all persons not defined already as residents or Eastern speculators. This reorganization into three subfiles produced 1164 residents, 104 Eastern speculators, and 280 nonresidents.

HISTORY OF THE SALT RIVER AREA, 1792-1840

EXPLORATION AND EARLY SETTLEMENT¹

Before 1763 the entire Mississippi Valley was claimed by France. There were few settlements, but the French had established themselves at Kaskaskia, in what is now Illinois, and at Ste. Genevieve, in what is now Missouri. Ste. Genevieve was established in 1732 as a port on the Mississippi River for the lead mining area around Potosi. The French cession of land east of the Mississippi to England in 1763 caused many French to move across the Mississippi into Missouri, unaware of the secret treaty ceding Louisiana territory to Spain. In 1764 Pierre Laclède Liguist, a fur trader from New Orleans, established a trading post at the future location of St. Louis. After 1770 St. Louis became the Spanish administrative center for upper Louisiana.

American settlement of what was to become Missouri was promoted by the Ordinance of 1787 which prohibited slavery in the Northwest Territories (Violette 1906: 46). This had the effect of channeling southern immigrants west into Missouri, even though it was Spanish territory. The Spanish policy of granting large tracts of land to settlers was also a factor in the early settlement of the area.

Louisiana Territory became a French possession again in 1800 and was purchased from Napoleon by the United States in 1803. Settlement at this time was confined to a narrow band along the Mississippi, the only major towns being St. Louis and Ste. Genevieve. However, the United States government, anticipating settlement in the interior, quickly moved to extinguish Indian title to the area. On November 3, 1804, a treaty was negotiated with the Sac and Fox Indians and ratified by Congress on February 2, 1805, ceding Indian claims to land between the Missouri and Mississippi rivers (Thomas 1909:210). A treaty with the Osage Indians negotiated on November 10, 1808, and ratified on April

28, 1810, ceded all Osage claim to lands north of the Missouri River and to land south of the Missouri and east of a line from Fort Clark (near the future location of Kansas City) south to the Arkansas River (Thomas 1909:21-216).

The earliest settlement in the interior of Missouri was along the Missouri River in an area which came to be known as Boon's Lick. In 1807 the Boone brothers began extracting salt from a spring on the north side of the river in what is now Howard County (Figure 1). Settlement began nearby in 1810, in what became known as the Cooper settlement in Boon's Lick. This early settlement, founded by Benjamin Cooper and 10 others, was located in the first area of deep loess soils west of St. Charles. Good soil and the presence of the Boones were what first attracted settlers. Settlers also were following a westward extension of the eastern forest environment, with which they were familiar (Thomas 1909:213; Schroeder 1968:2).

The Cooper settlement was attacked during the War of 1812 by Sac and Fox Indians led by Black Hawk, a Sac brave who renounced the 1804 treaty. Further settlement in the area was deterred by the threat of Indian attack until Black Hawk signed a treaty on May 16, 1816, confirming the treaty of 1804. However, Governor Clark already had issued a proclamation on March 9, 1815, unilaterally defining an area north of the Missouri River as being open to settlement. That same day it was annexed to St. Charles County and later became part of Howard County, established on January 23, 1816 (Thomas 1909:214, 217). Creation of Howard County was an inducement to further settlement since it brought local government and law enforcement to the area (Schroeder 1968:9).

Immigration and settlement increased population in the Boon's Lick area rapidly after 1815. By 1820, one-third of the white population of Missouri lived in the Boone's Lick area (Viles 1920:38). Franklin, the county seat of Howard County, was a town of over 1000 people (Viles 1920:41). As Viles (1920:38) notes, "The Booneslick was the El Dorado of the immigrants following the Ohio westward, the tangible manifestation of cheap land and boundless opportunity." Timothy Flint, a resident of St. Charles in 1817, noted that "an hundred persons have been numbered in a day passing through St. Charles, either to Boone's lick, or Salt river" (Flint

¹ This summary is based on information found in Switzler (1879), Holcombe (1884), Violette (1906), Thomas (1909), and Viles (1920).

1970, II:110). Flint also commented on the wealth of many of the immigrants, some families having nine or ten wagons, carrying two or three tons each, with many slaves and cattle and hogs. Over 1% of the population of Missouri in 1820 consisted of slaves, owned by a relatively prosperous class of people from Kentucky and Tennessee "who had taken advantage of the rising land values there and moved to Missouri with some money and their slaves" (Viles 1920:39).

Settlement of the Salt River area in northeast Missouri apparently did not begin until after the best land in the Boone's Lick area already had been taken. Newspaper accounts began mentioning Salt River as a destination of immigrants in 1819: "some turn to the Boons Lick, some to the Salt River—lands of promise" (*Missouri Gazette and Public Advertiser*, June 9, 1819). Henry Schoolcraft (1853:226) noted "rapidly progressing" settlements on the lower Salt River in 1819. However, this early flow of settlers into the area was curtailed in late 1819 by worsening economic conditions caused by the Panic of 1819 (Anderson 1938:169).

Early exploration and settlement of the Salt River area was carried out at the end of the eighteenth-century by French residents of St. Louis. Maxent, a fur trader and partner of Pierre Laclède, mentions exploration of the Auhaha (the Indian name for Salt River) as far west as the forks (the future location of Florida) (Holcombe 1884:128). The first recorded settlement in the central Salt River area was made in 1792 for the purpose of salt production. In the spring of 1792 Maturin Bouvet of St. Louis traveled up the Salt River by boat to a point in the eastern portion of the project area and then went overland north about 1.5 miles to a salt spring located near the present community of Spalding, in the NW 1/4 of the SW 1/4 of Section 2, T6N, R6W (in the northeast corner of the project area). Bouvet tested the quality of the salt and returned to St. Louis for supplies (Holcombe 1884:130-131).

During the summer and fall of 1792, Bouvet and three assistants built a salt furnace, warehouse, and dwelling house, cleared a large field, and extracted salt. Bouvet sent his assistants to St. Louis for more provisions for the winter, but when they did not return, he also left for St. Louis. Returning to the salt works in the spring, Bouvet found the Sac Indians had destroyed his buildings and carried off remaining supplies (Holcombe 1884:131).

Bouvet made no further attempt to occupy the area until 1795 when he petitioned the Spanish governor at St. Louis for a land grant of 20 arpens square around the salt spring. When this was approved Bouvet rebuilt his salt factory and house at the springs and built a warehouse on the Mississippi at Bay de Charles near the future location of Hannibal. Since he found that the Salt River was "uncertain and difficult of navigation at all

seasons of the year" (Holcombe 1884:133), salt was to be transported overland by mule or pack horse to Bay de Charles and then boated down the Mississippi to St. Louis. Bouvet was granted 84 arpens at Bay de Charles where a settlement was begun with up to 25 people, several houses, fields, and gardens. Salt was shipped to St. Louis until 1800 when Indians raided the settlement and killed Bouvet (Holcombe 1884:135).

Bouvet's estate was purchased by Charles Gratiot, who obtained another grant of one league square around the salt works and also obtained a grant more precisely defining the boundaries of land at Bay de Charles. Gratiot tried to reestablish the salt works in 1801 but was driven out by Indians. These land grants never were surveyed by the Spanish or French and were the cause of much litigation in later years (Holcombe 1884:136).

Perhaps the first Anglo-American settler in future Ralls County was Samuel Gilbert, a salt-maker who in 1808 located near what is now Saverton. He joined three French families who already were living there (Megown 1878:9). Another Anglo-American settler was James Ryan, who in 1811, settled at the mouth of Turkey Creek on the south bank of the Salt River. In 1812, Charles Fremon Delauriere began making salt three miles north of the present location of New London, but was driven out by Indians (Holcombe 1884:142). At least two other settlers were living along the Salt River in 1812, but all were forced back to St. Louis by hostile Indians during the War of 1812 (Megown 1878:9).

In 1817, after the end of the War of 1812, Giles Thompson built a cabin near Fremon's (Fremon's) Lick north of Salt River and was probably the only settler that far north (Holcombe 1884:143). Thompson was visited in September, 1817, by a party of five men from Bourbon County, Kentucky, who had come overland from the Boon's Lick country and were looking for a place to settle. They found the Boon's Lick settlements "considerable crowded, and all of the desirable locations taken up" (Holcombe 1884:143). Some picked out homesites near Salt River and then returned home to Bourbon County and probably influenced many from that area to immigrate to the Salt River country.

Settlement was promoted by completion of the General Land Office (GLO) survey and the beginning of land sales in the Salt River area in 1818 and 1819 (Chapter 4). Early settlement along the Salt River was concentrated east of the project area around Louisiana and New London, near the Mississippi River. These towns were the county seats of Pike and Ralls counties, respectively, and were founded in 1818-19, although Ralls County was not established until 1820 (Figure 2). Only a small amount of land in the project area was sold during the first year of public land sales (1818-1819), probably due to its relative inaccessibility compared with land closer to the Mississippi. Land sales were held

at the land office in St. Louis, and it is probable that most land sold in the project area in 1819 was entered by speculators who did not intend to settle it. However, two settlements in the area probably were established by 1819: the Ely settlement in T55N, R6W, south of the Salt River, and the Smith settlement, north of the Middle Fork in T54N, R9W. (West and Pouse [n.d.] and Henning [n.d.] mention arrival of these families in or prior to 1819.) "Ely's settlement" is mentioned in a February 14, 1823, entry in the county road book and the "Smith settlement" is mentioned in an August 10, 1824, entry (RCRR A:5, 7).² Three Ely brothers are listed in the 1822 Spencer Township poll book (Megown 1878:9). Joseph Smith and his sons, Joseph H. Smith, and Alexander W. Smith are listed in the 1822 poll book of Salt River and Union townships. Once these early settlements were established, there was little further immigration to the area, due to the economic depression after the Panic of 1819. Further settlement and land sales did not resume on a major scale until the late 1820s, climaxing in the economic boom period of 1831-1836. When immigration did resume, these two settlements became the foci for later settlement (see below and Chapter 4).

REGIONAL ECONOMIC CYCLES

As mentioned previously, a period of economic expansion followed the War of 1812, during which immigration and settlement in Missouri, especially in the Boon's Lick area, increased at a rapid rate. Economic expansion was facilitated by the easy credit policy of numerous state and local banks, with notes being issued far in excess of the amount of specie available. This was accompanied by "exorbitant land speculation," promoted by the federal government's credit policy of public land sales (Dorsey 1935:79). Money was borrowed from local banks to pay the required 2% down payment with no thought of how later payments were to be made (Cable 1923:75).

The economic crisis began in the East in 1818, when the Second Bank of the United States curtailed credit, called in notes from state banks, and forced state banks to resume specie payments. This abrupt change in policy was a cause of the Panic of 1819, the effects of

which did not reach Missouri until late in 1819. Public land sales (which began late in 1818) continued at a high rate during 1819, and wealthy immigrants continued to arrive throughout the year. Much of the economy of Missouri at the time was based on supplying new arrivals with food and other necessities until they became established (Dorsey 1935:79). Thus, as long as immigration continued, the Missouri economy remained fairly stable. The first sign of trouble was the failure, late in 1819, of the Bank of St. Louis, which had opened on December 13, 1816 (Cable 1923:56).

The Bank of Missouri, which had opened in 1817 in the basement of Auguste Chouteau's house, lasted a few years longer than the Bank of St. Louis. The bank's primary source of income was receipts from the fur trade. The bank also was the official repository of federal land office deposits from Illinois, Missouri, and Arkansas. It was able to survive the Panic of 1819 on the basis of the fur trade, but failed during the succeeding depression, in 1821 (Cable 1923:62-67). Failure of the Bank of Missouri was caused by too much credit for land speculation and the fact that much of the original stock (capital) of the bank consisted only of the personal notes of the directors. By 1821 the directors owed the bank \$7,000 more than the original stock and the Bank of the United States was requiring specie payments for land office deposits (Cable 1923:69).

Failure of the banks meant that all currency they had issued was worthless and, with a general lack of specie and the cessation of immigration in 1820, the economic boom abruptly collapsed. With no new immigrants arriving, speculators who had bought vast quantities of land on credit had no one to resell it to and no way to make payments to the government for it. Land and commodity prices fell precipitously. With no new immigrants arriving to buy surplus agricultural products, corn prices fell from \$3-5/bushel to 10¢/bushel (Dorsey 1935:82). Merchants who had purchased goods for resale on credit were saddled with unpayable debts. With the decline in prices, the value of loans called in had five times their value before the collapse (Dorsey 1935:84). A considerable amount of land was sold for delinquent taxes and debtors were imprisoned (Dorsey 1935:8).

The new Missouri state government tried to remedy the lack of currency in the state by passing the Loan Office Act in 1821. Loan certificates were issued in small denominations: a maximum value of \$1000 with land as security and up to \$200 with personal property as security. Loans were to be repaid at 10% of the certificate's value per year with 2% interest. Certificates were to be accepted as payment for all debts to the state, including taxes, and state employees were paid in certificates (Cable 1923:76). However, in 1822, the system was declared unconstitutional. Certificates were discounted 50% and soon became worthless, again leaving the state

²Abbreviations for references to county records are given in Appendix I.

without currency and dependent primarily on barter for most transactions (Cable 1923:79).

There was little economic growth in Missouri until the end of the decade, when in 1829, a branch of the Bank of the United States opened in St. Louis. Its more conservative practices restored public confidence in bank notes, and Cable (1923:83-84) attributes the building of stores, warehouses, and paving of streets in St. Louis in the early 1830s to the influence of the branch bank. The stability of this bank was due primarily to deposits of federal funds from land offices, the army, and the Bureau of Indian Affairs. However, President Jackson withdrew all federal funds from the bank in 1834, although final liquidation of all accounts was not completed until 1837 (Cable 1923:84).

The depression was over in most Ohio Valley cities by the middle 1820s. Wade (1959:190) attributes economic expansion during this period to improvement in transportation facilities, especially the steamboat, which made two-way traffic on the Mississippi and Ohio rivers possible. The number of steamboats in operation increased from 33 in 1819, to 77 in 1824, and to 187 in 1830 (Wade 1959:162, 190). River traffic was especially crucial for St. Louis, a commercial supply point that originally had served fur traders and lead miners, but which was making the transition to a transshipment point for agricultural goods and to a supply center for an expanding rural hinterland in Missouri and Illinois (Wade 1959:201-202). River traffic at St. Louis doubled between 1831 and 1835 and the population of the town increased from 5000 in 1827 to 15,000 in 1836 (Cable 1923:96).

The Branch Bank of the United States was replaced in St. Louis by the Cincinnati Commercial Agency, a branch of the Commercial Bank of Cincinnati. It opened on June 1, 1835, with a contract for the deposit of federal funds, and it purchased the assets of the Branch Bank in November, 1835 (Cable 1923:9-96). The Cincinnati Commercial Agency operated in St. Louis until May, 1837, when it was closed by order of the state General Assembly so that a state bank could be chartered (Cable 1923:98).

Economic expansion that began in the late 1820s triggered another nation-wide cycle of inflation and easy credit that resulted in another crash in 1837. Uncontrolled inflation began in 1834, accompanied by increasing speculation in public lands and a multiplication of state banks that issued unredeemable currency (Cable 1923:169). The situation was exacerbated by effects of the European crisis of 1836, but the immediate cause of deflation was President Jackson's specie circular in July, 1836, which decreed that only gold and silver would be accepted as payment at federal land offices (Cable 1923:169). A run on specie at state banks caused them to suspend specie payments. Indiana, Kentucky, and Ohio

banks had deposits of \$19,442,224, but only \$4,710,416 of this was in specie (Cable 1923:170).

The effects of the specie circular were less severe in Missouri, where speculation was not as rampant as in other areas, due to a belief in "hard money." Missouri residents, except those in St. Louis, had little use for banks (Cable 1923:170). Business transactions declined 90% in St. Louis by May, 1838, but there were few business failures (Cable 1923:170).

The Bank of the State of Missouri, chartered by the state legislature, opened on May 10, 1837, in the midst of recession. Capital included state bonds and private notes, but loans were to be redeemable only in specie. The state bank became the federal government depository on July 1, 1837, and purchased the assets of the Cincinnati Commercial Agency the same month (Cable 1923:163-164). The Missouri state bank suspended specie payments late in 1837, as did other banks, but it was able to resume specie payments earlier in 1838 than other banks. During the period of suspension, the Missouri bank actually was able to sell \$100,000 worth of specie to the federal bank at Philadelphia at a 2% profit (Cable 1923:171-172).

The Missouri bank refused to take risks and did little to expand circulation. Consequently, notes of other state banks, especially those of Illinois, circulated widely in Missouri as currency, even though they had been suspended. After November 12, 1839, the Missouri bank declared it would accept only specie or notes of specie-paying banks. Illinois notes were not accepted by the Missouri bank, although they had been accepted by many merchants. Missouri merchants who were left holding unredeemable notes retaliated by withdrawing deposits and refusing to pay back loans to the Missouri bank (Cable 1923:179). The run of withdrawals was balanced somewhat by federal land office specie deposits in 1839. The Missouri bank was the only bank in the West that did not suspend operations during this period, and it became known as the "Gibraltar of the West" until the Panic of 1857 (Cable 1923:18, 187). On March 12, 1841, the bank again began accepting notes of suspended banks to placate St. Louis merchants. In 1843, the bank instituted suit against the Illinois state bank to reclaim the debt on Illinois notes (Cable 1923:184). Expansion of the economy began again in 1843, and with ameliorating economic conditions, the Missouri bank also began to expand. The bank enjoyed a monopoly in the state until 1857 (Cable 1923:187-188).

Branches of the state bank were opened in Fayette in 1837 and in Palmyra in 1839. The Palmyra branch was opened with 10% of the capital of the main bank (Cable 1923:176), and its location there probably was due to the presence since 1824 of a federal land office (Rohrbaugh 1968:17). The Palmyra branch had three employees in 1840 and a circulation of \$160,000, with \$17,223 in

specie and currency on hand (Cable 1923:211).

The history of economic and banking conditions in Missouri documents that the region went through several cycles of economic expansion and rapid deflation. Inadequate and unsound banking institutions inhibited exchange and development. The state lacked any currency beyond a limited amount of gold and silver specie during the depression period of 1822-1828. During the 1837-1842 depression, the Bank of the State of Missouri's conservative practices did little to facilitate exchange and commercial expansion, leaving merchants and others to rely on unredeemable out-of-state bank notes. Town foundation, land sales, and other economic activities in the project area were tied closely to the economic cycles discussed above.

ORGANIZATION OF LOCAL GOVERNMENT AND COMMUNITIES: 1818-1830

Population growth and development of a more stable pioneer society are reflected in formation of local governments at the township and county levels and by establishment of towns to provide goods and services for the local population. These two processes were related, since the most successful towns usually were county seats that combined administrative and economic functions.

A strong county government with weak townships as internal subdivisions was characteristic of political organization in the South, where leadership was provided by a wealthy elite or planter class. County government in the South usually was directed by members of this class through positions in the county court that combined executive, legislative, and judicial powers (Elkins and McKittrick 1954:73). This was the case in early Missouri, where county political power was concentrated in the county court, which was composed of three (or sometimes more) county judges, one of whom was president of the court. County judges were appointed by the governor before 1824 and from 1828 to 1830. The governor also appointed the first county judges of newly formed counties. Between 1824 and 1828 county judges were elected by, and chosen from among, justices of the peace in the county. After 1831, county judges were elected by all eligible voters in the county (Megown 1878:10). County judges established county roads, set county taxes, appropriated county funds, organized political townships, set polling places, issued business licenses, and acted as a probate court. They also had the power to bind orphans as apprentices, to declare people insane, and to help support the poor at

county expense. Other county officials included a county clerk, a treasurer, a collector, an assessor, and a sheriff. Each county also had a circuit clerk and recorder of deeds, who was the local representative of the judicial branch of state government—the circuit court—that served several counties.

Counties were divided into political subdivisions called townships (not to be confused with congressional townships, which were 36 mi² [93.2 km²] quadrants as surveyed by the GLO), each of which had several justices of the peace, a constable, and a polling place. Justices of the peace were at first recommended by the county court for appointment by the governor and in later years were elected by the residents of the township. Justices of the peace decided simple legal cases and disputes, acted as public notaries, and performed marriages. One of their number was appointed each year by the county court to divide roads in the township into road districts and to assign people to maintain them. The county court designated a polling place in each township and three election judges were appointed to supervise elections.

Originally, all land north of the Missouri River to which Indian title had been extinguished was part of St. Charles County, formally established on October 1, 1812. After the war of 1812 and cessation of Indian attacks, the Boon's Lick area along the Missouri River began to experience rapid settlement. This resulted in the formation of Howard County on January 23, 1816 (Figure 1).

The beginning of settlement in northeast Missouri was reflected by the creation of Lincoln, Montgomery, and Pike counties on December 14, 1818. Pike County extended north to the border of the Iowa Territory. Louisiana, located on the Mississippi River near the mouth of the Salt River, was the original county seat of Pike County, and in 1818, was the northernmost town in northeast Missouri (Figure 1). A ferry across the Mississippi established at Louisiana provided access to northeast Missouri from Illinois.

Ralls, Boone, and Chariton counties were created on November 16, 1820. Ralls County was formed from the area of Pike County north and west of its present boundaries. It originally extended north to the Iowa border and west to the border with Chariton County, which at that time was the line between ranges 13 and 14 (Megown 1878:9), and included the area that later was divided into the counties of Marion (1826), Randolph (formed from parts of Chariton and Ralls counties in 1829), Monroe (1831), and Audrain (1836). After 1826, the area north of the line between townships 56 and 57 became part of Marion County, and in 1836 the part of Marion County west of the line between ranges 8 and 9 became Shelby County (Figure 1).

New London, platted in 1819 by William Jamison,

was designated the county seat of Ralls County by a commission appointed by the governor (Figures 1 and 2). The first county court met at Jamison's house on March 2, 1821, and appointed Stephen Glascock county clerk, circuit court clerk, treasurer, probate judge, and justice of the peace. Green DeWitt was appointed sheriff and collector. A two-story log combination court house and jail was built in 1822 (Megown 1878:9).

The county court divided the county into four political townships: Spencer, Salt River, Mason, and Liberty. The boundary of Spencer Township began at the Mississippi River and ran west along the line between townships 6 and 7 until it intersected the line between ranges 4 and 5. It followed this line south to the Salt River, continued west along the river to the middle of Range 6, and then turned east along the Montgomery County line to the Pike County line, following it to the Mississippi (Figure 2). Salt River township comprised everything west of this line to the Chariton County line. Mason and Liberty townships were composed of land north of Spencer and Salt River townships (Megown 1878:9, 10), and were incorporated into Marion County in 1826. Union Township was in existence by 1822 (Union Township Pollbook 1822) and probably consisted of land west of the line between ranges 9 and 10.

The area of Ralls County was reduced considerably when Marion County was formed, and it is probable that a new political township was created in Ralls County at this time. Since the pre-1854 minutes of the Ralls County court are not available, precise information concerning the county's organization is lacking. The 1828 poll books reflect the creation of Jackson Township from land formerly included in Salt River and Union townships (Figure 2). By plotting first land entries of those persons listed as residents of Spencer and Salt River townships in the 1830 census, it appears that the boundary between Spencer and Salt River townships south of the Salt River was the middle of Range 6 (the boundary north of the river is unclear but may have been on the line between ranges 6 and 7). The boundary between Salt River and Jackson townships lay along the line between ranges 8 and 9, and the boundary between Jackson and Union townships probably lay along the line between ranges 10 and 11 (Figure 2). Saverton Township, which appears in the 1830 census, was east of Spencer Township along the Mississippi River.

An important function of the county court was creating public roads. At the time of the establishment of Ralls County, the only road (probably nothing more than a rough trail) through the project area led from Franklin (the county seat of Howard County and center of the Boon's Lick area) to New London, passing through Middle Grove, a settlement established in T53N, R12W, by Ezra Fox and others in 1820 (NHC 1884:91). This road passed within a few miles of the Smith and

Ely settlements before reaching New London. The route was laid out more formally and cleared by order of the Ralls County court in 1825 (RCRR A:8). It became a mail route with Middle Grove as the half-way house (NHC 1884:178) between New London and Fayette, which became the county seat of Howard County in 1823 (Voss 1969:76).

Roads connecting the Ely and Smith settlements with the New London-Fayette road were established in 1824 and 1825, respectively (RCRR A:6, 8). The road through the Ely settlement led to Bouvet's Lick in the corner of the project area, where it connected with roads to Hannibal and New London. The road through the Smith settlement went to Palmyra (Figure 3). Both Palmyra, which became the county seat of Marion County in 1826, and the river port of Hannibal (also in Marion County) were founded in 1819 (Holcombe 1884:146).

Further settlement in the project area during the early 1820s appears to have taken place south of the New London-Fayette road, along the Elk Fork of Salt River in the southwest part of T54N, R9W, and the southeast part of T54N, R10W, where the earliest settlers probably were members of the McGee family, who arrived in 1824 (NHC 1884:74), and members of the Donaldson and Roberts families. Robert Donaldson appears in the 1822 poll book of Salt River Township and James Roberts appears in the 1824 poll book of Union Township. Another area settled early in the 1820s was along Pigeon Roost Creek, near the New London-Fayette road, where the Scobee family and the Rogers brothers (Andrew, Aleri, and Ariel) purchased hundreds of acres early in the 1820s. Stephen Scobee, Sr. arrived in Ralls County in 1821 (NHC 1884:496) and Andrew Rogers, who purchased 1440 acres in 1819, was in the county by 1824 (RCRR A:7), if not before. A post office that served most of the project area was established in the Pigeon Roost Creek settlement on December 28, 1825, and was known as the Mount Prairie post office (*Perry Enterprise*, April 26, 1962). There also were early settlers along upper Lick Creek, where Peter Grant (who was a justice of the peace during most of the 1820s) and George Purvis had settled by 1822 (Poll Book of Salt River Township, 1822). North of the Ely settlement in sections 2, 3, 10, and 11, of T55N, R6W, there was a group of early settlers, including Thomas P. Norton, who was in the county by 1822, according to a poll book for that year (Megown 1878:9).

A road from Bouvet's Lick (in the northeast corner of the project area) that ran along the west side of Salt River, crossed at the future site of Cincinnati, and connected with the New London-Fayette road, was established in 1828 (RCRR A:12). A road running parallel to the 1824 road through the Ely settlement was established in 1829 (RCRR A:14). This made three

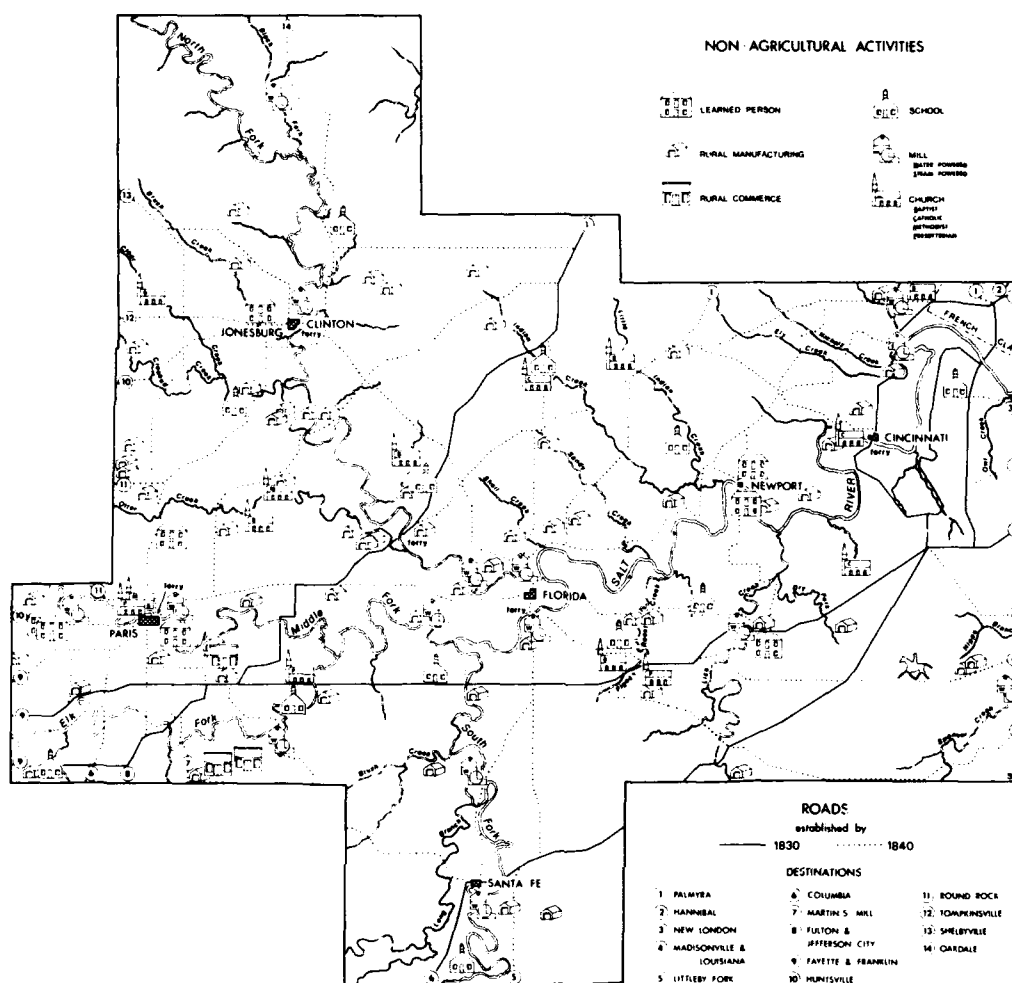


Figure 3. Map of roads, towns, mills, rural nonagricultural specialization, schools, and churches in the project area in 1840.

parallel roads connecting Bouvet's Lick to the Ely settlement and to the New London-Fayette road.

SETTLEMENT IN 1830

The influx of settlers in the late 1820s increased the population density of Salt River Township by 1830 to 2.7 persons/mi² (1.04/km²), not including slaves. Population density in Jackson Township, to the west, was 1.7 persons/mi² (0.4/km²) (calculated from the Ralls County census of 1830). This probably reflects greater accessibility of the eastern part of the project area (Salt River Township) at this time. As noted previously, there were three parallel roads running north-south through the

area of densest settlement in Salt River Township around the holdings of the Elys and Thomas Norton in T55N, R6W, connecting Bouvet's Lick and the New London-Fayette road. Roads from Bouvet's Lick led to both Hannibal and New London, the only nearby towns.

Scattered settlement was located north of the Salt River in ranges 6, 7, and 8 with a settlement cluster in the SW corner of T55N, R8W (Figure 2). However, west of Range 8 and north of Township 54, settlement was almost nonexistent in 1830. Settlement was fairly substantial along Spencer Creek in the southeast corner of the project area, and along Lick Creek and Pigeon Roost Creek. The Smith settlement increased in size to the north of the Middle Fork in Range 9 and there was a continuous area of settlement along the Elk Fork in the west half of Range 9 through Range 10 along the New London-Fayette road.

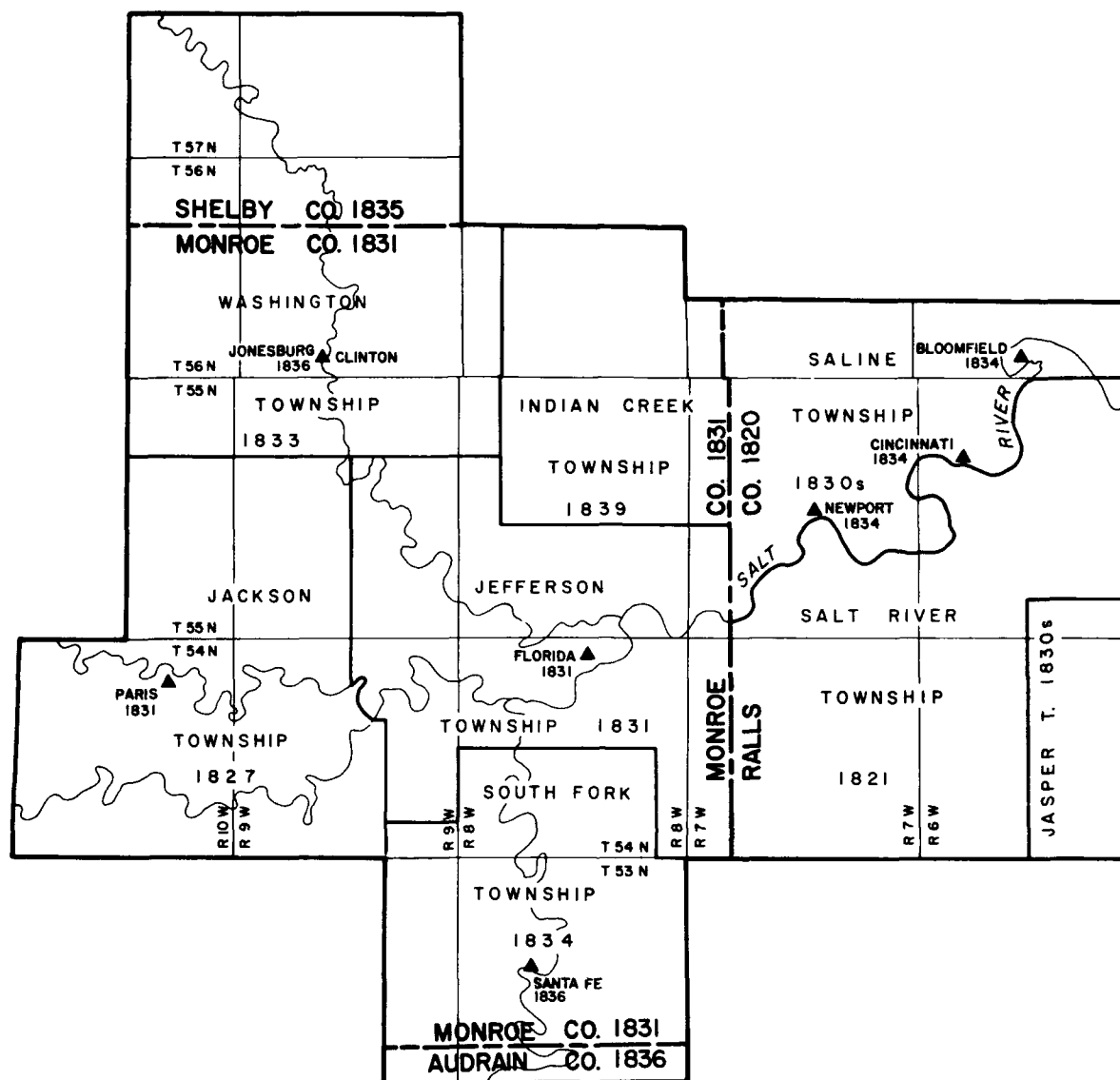


Figure 4. Map showing local political boundaries (counties and townships) in 1840, with dates for formation.

Organization of Monroe County

Monroe County was created by the state General Assembly on January 6, 1831 (NHC 1884:93). The area included in Monroe County was all of Ralls County west of a line running north-south one mile west of the line between ranges 6 and 7 (Figure 4). The north boundary was the Marion County line along the line between ranges 6 and 7; the west boundary was the Randolph County line located between ranges 12 and 13. The south boundary was the line between townships 52 and 53. The area south of this line (which later became

Audrain County) was attached administratively to Monroe and Callaway counties. In the same act, Hancock S. Jackson of Randolph County, Stephen Glascock of Ralls County, and Joseph Holliday of Pike County (who later moved to Monroe County [NHC 1884:94]) were named commissioners to locate the county seat.

The first county court met on February 16, 1831, at the house of Green V. Caldwell, located on the New London-Fayette road in the corner of Section 24, T54N, R10W. Caldwell came from New London, where he probably had been a storekeeper, and opened a store in his house, hoping it would become the site of the

Monroe County seat (NHC 1884:132-133). Caldwell's location was logical since it was one mile west of the intersection of the Palmyra and New London-Fayette roads. The original and new (1829) routes of the New London-Fayette road diverged at Caldwell's house. In addition to Caldwell's store, there was a blacksmith shop nearby, at the intersection of the Palmyra and New London roads, operated by James H. Smith (MCCR A:141).

The county court did meet at Caldwell's house on five occasions (February 16, May 1, June 4, August 1, and September 12, 1831), but Caldwell died sometime between the first and second meetings (MCCR A:2). The commissioners appointed to choose the site of the county seat did not choose the area around Caldwell's house and store, where nearby road intersections provided access to towns outside the project area. Instead, they chose a site about 2.5 miles to the northwest, near the Middle Fork of the Salt River (Paris on Figure 4) on land owned by James C. Fox, the son of Ezra Fox, the first settler in the Middle Grove area (Union Township) in the southwest part of the county. Fox purchased this piece of land (the west half of the northwest quarter of Section 11, T54N, R10W) on January 3, 1831, three days before the act creating Monroe County was passed. Fox donated 4 acres of his 80-acre tract for the "seat of Justice" of Monroe county on June 3, 1831, as recorded in a deed from James C. Fox to the commissioners named above, on behalf of the county (MCCR A:7). James R. Abernathy sold 9 acres of an adjacent 80-acre tract (purchased on September 16, 1830) to the commissioners for \$25 (MCCR A:9). Abernathy married Rosanna Davis (NHC 1884:505), probably a sister of Reese Davis, one of the first judges of the county court, also from Union Township. Abernathy was appointed commissioner of township school lands and county treasurer during Davis' tenure on the court. The remainder of the town tract selected by the commissioners was located on 25 acres of land owned by Hightower T. Hackney. Hackney sold this to the commissioners for \$100 and apparently left the county, since he does not appear in the 1840 census.

After selecting the townsite, the commissioners were guests in James Fox's house near Middle Grove. "Perhaps as some consideration for the kind hospitality extended to them, Mrs. Fox was permitted the honor of naming the new town, which she called Paris, after Paris, Kentucky, her old home" (NHC 1884:133). Mrs. Fox was Ann Smith (Henning n.d.), a member of the Smith family who began the Smith settlement.

At the first meeting of the county court on February 16, 1831, at Caldwell's house, John Curry, William P. Stephenson, and Andrew Rogers presented their commissions from the governor to serve as county judges for four years (MCCR A:1). John Curry's house and

land was located across the road from Caldwell's house. William P. Stephenson probably was from Union Township (the Middle Grove area) and Andrew Rogers was from the Pigeon Roost Creek settlement located in what later became Jefferson Township. At this meeting Ebenezer W. McBride was appointed county clerk and posted a \$3000 bond. John S. McGee was appointed county assessor and posted a \$400 bond (MCCR A:1).

When the county court next met on May 1, 1831, at the house of the late Green V. Caldwell, there were two new justices: Robert Simpson and Reese Davis. No explanation is given in the record for this change, although John Curry may have opposed the Paris location for the site of the county seat. Robert Simpson, elected president of the court, owned 400 acres along the New London-Fayette road about two miles east of Caldwell's house. Reese Davis was from Union Township (probably from the Middle Grove area) and owned four slaves. Andrew Rogers was from the eastern part of Monroe County, having entered 1440 acres in 1819 between Pigeon Roost Creek and the South Fork of Salt River. He previously had served as a county judge of Ralls County from November, 1827, to June, 1828 (Megown 1878:10), and ran unsuccessfully for the state legislature in August, 1828 (Ralls County poll books 1828). Andrew Rogers apparently was living with a brother, Aleri Rogers (Ralls County census 1830), to whom he had sold 640 acres along Pigeon Roost Creek in 1828 (RCDR A:478-479).

At this meeting of the county court, a sheriff (William Runkle) and a collector (Samuel H. Smith of the Smith settlement) were appointed. The county was divided into three townships running north-south. Jefferson Township, to the east, was 10 miles wide; the central township, Jackson, also was 10 miles wide; and the western township, Union, was 11 miles wide. A polling place was designated in each township and election judges were appointed. Elections in Jefferson Township were to be held at the house of John Witt, near the site of Florida, and elections in Jackson Township were to be held at the house of Reese Davis, one of the county judges. A constable also was appointed for each township.

The third session of the county court was held on June 4, 1831, the day after the land for Paris was deeded to the county by James C. Fox, James R. Abernathy, and Hightower T. Hackney. At this session James C. Fox was appointed commissioner for the sale of Paris town lots, and he posted a bond of \$8000. James R. Abernathy was appointed commissioner of township school lands and posted a bond of \$1,000. This position involved selling the lands in Section 16 of each congressional township in the county and collecting the proceeds for the support of schools. Both Fox and Abernathy were allowed to collect commissions on the sales they made. John S. McGee was appointed county surveyor (as well

as assessor; see above) and was ordered to survey the town of Paris. Lots in Paris were ordered to be sold at auction on September 12, 1831, on credit, with one-third of the price payable after 6, 12, and 18 months from the date of sale (MCCR A:45).

James C. Fox presented the town plat of Paris to the county court on August 1, 1831, in Caldwell's house. The county court ordered town lots to be sold on September 12 to the highest bidder and reserved block 1, lots 1 and 2, for a jail and block 2, lot 8, for a market house. The site of the court house already had been designated on the plat as the public square. The next meeting of the county court was to be held in Paris (MCCR A:9).

Sale of Paris town lots was successful, with 127 lots being sold for \$20-30, except for about 30 lots that had commercial potential along Main Street and around the square. These lots must have stimulated competitive bidding, since they were sold for \$50-150 each. The highest price paid was for lots 6 and 7, in block 12, opposite the court house site (MCCR A:128-134). They were purchased by Marshall Kelley, who opened the first inn and tavern in Paris. He was issued a tavern license by the county court in February, 1833, retroactive to November 12, 1832 (MCCR A:43). This inn later became the Glenn House hotel.

The August, 1831, meeting of the county court was mostly concerned with establishing roads and road districts. Road districts were established for maintaining roads already in existence (the New London-Fayette road and Palmyra road), and petitions were received for roads to be established joining Paris with the New London-Fayette road to the southwest, southeast, and south. The road to the south was to extend to the Boone County line in the direction of Columbia. Petitions for roads from Paris to Florida (Figure 3) and from Paris in the direction of Hannibal also were received. These roads were laid out and declared to be public roads in 1832.

At the November 19, 1831, meeting of the county court in the house of Matthew Walton in Paris, \$3100 was appropriated to build a brick court house 50 feet square and two stories high (MCCR A:16). Sylvester Hagan, who had been appointed superintendent of county land in Paris at the November 7 meeting (MCCR A:11), was directed to advertise for bids. Also ordered to be built was a wooden jail with dimensions of 32 x 20 feet, containing two rooms each 7 feet high (MCCR A:15). This was to be a substantial structure with walls 30 inches thick. Doors were to be covered with quarter-inch iron plate having spikes 4 inches apart. Apparently one room of the jail was for criminals and the other room was for debtors, since modifications to the "debtors' room" were ordered to be made in November, 1834, and were to consist of the addition of an inner door

having an opening 8 inches square "for the purpose of handing in nourishment" to the persons within the "debtors' room" (MCCR A:154). The jail, for which \$1000 had been appropriated, was completed in February, 1834, a foot higher than specified (MCCR A:91).

The county was funded from several sources: property taxes, license fees, sale of town lots in Paris, sale of township school lands (Section 16), and the state road and canal fund (see below). Property taxes were set at 12.5¢ on every \$100 of assessed value (MCCR A:33). Licenses were required for merchants, grocers, retailers of "wines and spiritous liquors," inns and taverns, and ferries. Grocers' licenses were \$10 in 1831 and merchants' licenses and tavern licenses probably were also \$10 at this time. In 1837, merchants' license fees were set at \$22.50, grocers' licenses were \$10, and tavern licenses were \$20. These fees were split evenly by the county and the state (MCCR A:530). Merchants' and grocers' licenses were good for six months and tavern licenses were issued for one year.

The town of Paris (Figure 3) was "owned" by the county and proceeds from the sale of lots (less J.C. Fox's commission) became county funds. More lots were platted and offered for sale in September, 1835 (MCCR A:255). Occasionally, the source of funds disbursed by the county court is specified in the records, and it appears that the town lot funds were used in part to pay for the construction of the court house. Proceeds from the sale of Section 16 lands went to support county schools and was supervised by J. R. Abernathy, who received a commission on each sale. Trustees were appointed to receive the school funds for each congressional township where sales of Section 16 lands had taken place. The state road and canal fund, also known as the 3% fund, consisted of 3% of all revenue from federal public land sales in Missouri, which was given to the state to distribute among the counties for bridge construction and road maintenance (Peters 1845c:674-675).

The collector was responsible for sale of licenses and collection of property taxes. Money collected by the collector and the commissioner of town lots was turned over to the treasurer, who was allowed 3% of all money received. There was a different collector every year until 1837, but the position of treasurer was held by Ebenezer W. McBride from 1831 to May, 1833. McBride also was county clerk throughout the decade. James R. Abernathy, commissioner of township school lands, was appointed county treasurer in May, 1833, and retained the position throughout the decade.

Due to the lack of banking facilities, county funds were loaned or given in trust to local citizens. Proceeds from sale of school lands were given to trustees in each congressional township or school district. This was done as early as February, 1833, when funds from sale of

school land in Section 16, T54N, R8W, were entrusted to Edmund Damrell of Florida, who was a judge of the county court at the time (MCCR A:42). Funds from T54N, R10W, were entrusted to George Glenn. In May, 1835, new trustees were appointed for school district 11, which was in T54N, R8W, (MCCR A:207). However, Damrell (who was no longer a county judge) apparently did not give up the funds entrusted to him, since in May, 1836, he was ordered to pay into the treasury all money he had in his possession as trustee of the school district, and in June, 1836, the county treasurer (Abernathy) was sent by the court to recover school funds from Damrell. If he refused to pay, the treasurer was instructed to institute suit for recovery of funds (MCCR A:316, 325).

Apparently, the court was becoming dissatisfied with the performance of Abernathy as commissioner of school lands, since he was required to post a new \$1,000 bond in November of 1835 (MCCR A:272). In February, 1836, the position of school land commissioner was abolished and Abernathy turned over all proceeds from sale of school lands in his possession to the county court, which loaned them out to Samuel Curtright (president of the county court), Ebenezer W. McBride (county clerk), and four others (MCCR A:303). In 1836, the sheriff, Thomas Pool, was empowered to sell school lands. Pool also served as county collector in 1837, 1838, and 1839.

The state road and canal fund (3% fund) also was loaned to individuals. In September, 1834, the bonds of the road and canal fund were given to the constable of Jackson Township for collection (MCCR A:136). The money in the fund was given to Ebenezer W. McBride, county clerk, in June, 1835 (MCCR A:229). In September, 1836, Thomas Pool, the sheriff, received \$503 from the road and canal fund, and in November, 1836, Thomas B. Ragland, the collector, was given all money from the same fund (MCCR A:371, 397). Ebenezer W. McBride was given \$697 from the road fund in May, 1837, and Samuel Crow was given \$347.50 from the fund in trust for the county in May, 1837 (MCCR A:466, 489).

Money from the state road and canal fund was appropriated for construction of a bridge across the Middle Fork of the Salt River at Paris in March, 1834, to replace a ferry being operated by Edward M. Holden, the circuit clerk, recorder, and a justice of the peace (MCCR A:24, 41, 94). Commissioners appointed to draw up plans and to take bids included James R. Abernathy, Samuel Crow, and John Curry. On June 9, 1834, the commissioners gave the contract to James R. Abernathy and on August 6 he was given \$250 from the road fund to begin the bridge, using plans drawn up by Jesse Pavey (MCCR A:94, 106, 114, 118). A subscription was taken for additional funds for the bridge and Joseph Hagan was appointed commissioner in March,

1835 (MCCR A:183, 202). In February, 1836, Joseph Hagan and other commissioners were appointed to decide if alterations in the bridge plan were required. They reported in May that the bridge abutments were complete and that all material except weatherboarding was on the site. It was decided that Abernathy should be released from his contract but would be paid \$760.35 of the \$929.87 specified in the contract (MCCR A:316). This occurred at the same time that the position of commissioner of school lands (held by Abernathy) was abolished.

A new bridge commissioner, William K. Vanarsdall, was appointed on June 1, and a new contract was let to Joseph Hagan, who posted a \$1184 bond (MCCR A:327, 328). Hagan also was appointed public administrator of the county for two years, for which he posted a \$10,000 bond (MCCR A:328). This position apparently involved administration of estates without heirs. Meanwhile, Abernathy was granted a license to operate the ferry at the bridge site (MCCR A:444) and Vanarsdall, the bridge commissioner, was named superintendent of public buildings in Paris (MCCR A:469).

The bridge still had not been completed by August, 1837, when George M. Buckner and Alfred Orr were appointed to examine the bridge and to judge the worth of the work (MCCR A:531). On May 7, 1838, new plans and a new contract were drawn up. This is the last reference to the bridge through June, 1840. Thus, it appears that after six years, three contractors, numerous commissioners, and the expenditure of hundreds of dollars, there still was no bridge across the river at Paris.

J. R. Abernathy, although he had lost his position as commissioner of school lands and his contract for bridge construction, was still county treasurer and was receiving 3% of all incoming county funds and \$1.00 for every wagon and team that crossed the river on his ferry at Paris. Abernathy served as treasurer until 1843, when he was appointed prosecuting attorney for the circuit court. Abernathy later served as a county judge and was an owner of the *Paris Mercury* from 1844 to 1851 (NHC 1884:199, 505). James C. Fox, the commissioner of town lots, participated less in county government than Abernathy, being concerned principally with running his store, the first in Paris (NHC 1884:552). The county court met in a room on the second floor of his store before the court house was completed (MCCR A:43, 70).

TOWNSHIPS AND TOWNS, 1831-1840

Florida, located at the confluence of the North and South forks of the Salt River in eastern Monroe County

(Figure 3), actually was the first town platted in Monroe County, predating Paris by several months. The town site of Florida was surveyed March 26, 1831, and the plat was recorded on May 24, 1831. The original town contained 94 lots in 15 blocks. Florida was located in the south half of the northwest quarter of Section 3, T54N, R8W, which was purchased at the Palmyra land office on February 10, 1831, by a group of six local residents: Hugh A. Hickman, John T. Grigsby, William Keenan, William W. Penn, John Witt, and Richard Cave.

Florida was located at what was thought to be the head of navigation on the Salt River, where two water-powered grist and saw mills were located. One mill was located on the south bank of the South Fork in the southwest quarter of Section 3, T54N, R8W (Edwards Bros. 1876). The mill was built by Peter Stice, who purchased the property on September 2, 1828 (MCPBOE). Hugh Hickman and John Saling purchased the mill and 80 acres of land on November 19, 1830, for \$1000 (MCDR B:43). Hickman was the actual operator of the mill, since Saling was operating a mill west of Paris early in 1833 (MCCR A:45). Saling sold his half-interest in the Florida mill to Hickman on May 11, 1835, for \$700 (MCDR B:88). Hickman lived on a farm about 1.5 miles southeast of the mill on land purchased in November and December of 1830 (MCPBOE; NHC 1884:152). The other mill was built by Richard Cave in the fall of 1830 on the North Fork, in the southeast corner of Section 33, T55N, R8W (Powers 1831; MCDR B:405). Cave was living in a house near the mill in 1835 (MCDR B:405).

The other founders of Florida consisted of a storekeeper, a lawyer or a doctor, and several farmers. William N. Penn had a store at Hickman's mill in the fall of 1830, which may have been the first store in what was to become Monroe County (NHC 1884:92). William Keenan was either a doctor (NHC 1884:92) or a lawyer (Gregory 1965:9) and resided in Spencer Township in 1830 (Ralls County Census, 1830). John Witt and John Grigsby both were farmers, Witt having purchased land adjacent to the Florida town site in 1828 (MCPBOE). Richard Cave (the mill owner) sold his interest in the town lots to Robert Donaldson on February 16, 1831, for \$18.50, and Grigsby sold his interest to Donaldson on October 1, 1831, for \$30 (MCDR A:476, 477). Donaldson probably lived on 320 acres in the north half of Section 20, T55N, R8W, several miles north of Florida, which he purchased on October 13, 1829 (MCPBOE). Donaldson was a farmer and justice of the peace.

Town lots in Florida were advertised on April 16, 1831, in the *Missouri Intelligencer*, a Columbia, Missouri, newspaper. A public auction of lots was to be held June 1, 1831. However, no deeds to lots in Florida were made until July 5, 1832 (MCDR). The advertisement stated

that the Salt River was navigable for several months each year and that arrangements had been made with the state legislature for clearing and dredging the Salt River from its mouth to Florida. In preparation, the legislature passed an act in 1831 prohibiting dams being built below the forks of the Salt River (Gregory 1965:19). In March, 1834, the Monroe County court appropriated \$500 for clearing the Salt River from the forks to the Ralls County line, to be supervised by Andrew Rogers, Richard Cave, and Hugh Hickman (MCCR A:95). A later attempt to make the Salt River navigable to Florida, by the Salt River Navigation Company, is described below.

Three of the original founders of the town died within five years: William Keenan in 1834, Robert Donaldson in 1835, and John Grigsby in 1836 (MCPR). John Witt was imprisoned for debt in Randolph County in 1833 but was released in February 1834, "on petition of various householders of Monroe County" (MCCR A:74). Richard Cave sold his mill in August, 1835, but had a store in Florida in 1837 (MCCR A:443). He was in the Iowa Territory in 1840 (MCDR B:405, E:15). By 1838 at least 75% of the lots had passed out of the hands of the original purchasers.

The first house in Florida (probably located just outside the town limits to the east) was built by Edmund Damrell (NHC 1884:14), who arrived in the spring of 1831 (Powers 1931) and became a judge of the county court in May, 1832, replacing Andrew Rogers, who resigned. Damrell opened a "house of entertainment" in Florida in July, 1833, where elections were held in subsequent years (MCCR A:58, 111). Penn moved his store to Florida and a grocery was opened by Robert George and James Porter in 1834, if not earlier (NHC 1884:92; MCCR A:96). Judging by the grocery licenses granted, there were three or four groceries in operation simultaneously in Florida in the latter half of the 1830s (MCCR). Two merchant's licenses also were issued for Florida in 1834 (MCCR A:105). Trades represented in the 1830s in Florida included a blacksmith, a tailor, a shoemaker, a saddler, a furniture maker, a tanner, a harness maker, and a doctor (Gregory 1965:10).

John M. Clemens (father of Samuel Clemens) was a resident of Florida from 1835 to 1839, arriving during the period of economic expansion and inflation prior to the Panic of 1836. Clemens was urged to come to Florida from east Tennessee by his wife's brother-in-law, John Quarles, a merchant in Florida, who expected the town to develop rapidly as a supply point for the surrounding area (Roberts n.d.:11). Clemens entered 240 acres east of Florida in June, 1835, and purchased another 40 acres adjoining one of his entries (MCPBOE; MCDR B:87). All this land, with the exception of 80 acres, was bottomland along the river and included the forks area. Clemens also purchased a house and store in Florida

previously owned by James Bryant (MCDR C:266) in May, 1836. Clemens was living in another house located on 2.75 acres of land on the north edge of Florida when he left for Hannibal in 1839 (MCDR E:298).

Clemens' enterprises in Florida provide an example of the activities of a frontier entrepreneur. According to Holcombe (1884:914), Clemens had studied law in Columbia, Adair County, Kentucky, and had married Jane Lampton, the daughter of a Columbia dry goods merchant. He then moved to Tennessee where he participated in the organization of Fentress County and served as the first circuit court clerk. While in Florida from 1835 to 1839 Clemens engaged in farming and merchandising (Holcombe 1884:914).

Clemens was actively engaged in promoting and developing Florida, and his name appears first on the list of commissioners appointed by the state General Assembly to take subscriptions of stock for the Salt River Navigation Company, incorporated by an act of the General Assembly on January 2, 1837. This company was empowered to enter on any land along Salt River for the purpose of making the river navigable for steam boats from its mouth to the forks at Florida by dredging, changing the course of the river, and erecting locks and dams (*State of Missouri* 1836-37:229-234). The company was to be funded by subscription (the selling of stock at \$50 per share). Other commissioners included Edmund Damrell, Hugh Meredith (who purchased Cave's mill in 1835), two Florida merchants, and Paris businessmen, including James C. Fox. There also were commissioners from Ralls and Pike counties. As noted above, John Clemens had purchased 40 acres—which included the forks of Salt River—upon his arrival in 1835.

Clemens also was first on the list of commissioners appointed to sell stock in the Florida and Paris Rail Road Company, incorporated February 2, 1837, by the state General Assembly (*State of Missouri* 1836-37:237-238). The railroad was to run from the proposed head of navigation at the forks of the Salt River to Paris. Other commissioners included Edmund Damrell and Hugh Meredith from Florida, and James C. Fox and James R. Abernathy of Paris.

A third Florida venture in which John Clemens participated was the Florida Academy, incorporated on February 6, 1837, with Edmund Damrell as president and John M. Clemens, James W. Herndon, Braxton Pollard, John A. Quarles, Philip Williams, and James R. Abernathy as trustees. The academy was to have junior and senior branches with literature, reading, writing, and arithmetic in the junior branch and English and "other languages and sciences" in the senior branch. Orphans, the poor, and females were to be educated when funds allowed (*State of Missouri* 1836-37:146-148).

The navigation and railroad companies apparently never acquired the necessary capital to operate, since

little if any construction was ever carried out. Gregory (1965:20) states that a lock and dam was begun at Cincinnati in Ralls County but cites no evidence for this. It is not known if the Florida Academy ever functioned. It is probable that these ventures were proposed to the General Assembly in 1836 before the recession began and were not acted upon until early 1837. However, by this time contraction of the economy made capitalization of these ventures impossible. The charter of the navigation company was extended for two years in February, 1839, but to no avail (*State of Missouri* 1838-39:239).

John Clemens did not discontinue his activities in the area. Florida was incorporated on March 1, 1837, probably through the encouragement of Clemens. He was appointed county judge in November, 1837, replacing Edward Shropshire (who resigned) until the next election in the fall of 1838 (MCCR A:542). Clemens probably hoped he could promote the development of Monroe County and Florida through this position. The same day he was appointed, the county court granted a ferry license to Hugh Hickman for a ferry at his mill south of Florida. During Clemens' term on the court in May, 1838, \$500 was appropriated for a bridge on the North Fork of Salt River near Hugh Meredith's mill, and another \$500 was appropriated for a bridge on the South Fork near Hickman's mill.

John Clemens' last attempt to make his fortune in Florida was the construction of a saw mill located just above the forks of the Salt River on some of his bottomland adjacent to the river. Clemens filed a petition with the circuit court to build a dam five feet high for a water saw mill on March 20, 1838, and the request was approved on September 17, 1838 (MCCCR, Box 21, No. 431). Apparently, something was constructed on this land since when he sold it to Ira Stout of Hannibal in November 1839, along with other land totaling 160 acres plus his house and 2.7 acres on the edge of Florida, he received \$3000. The house was worth less than \$500, since Stout sold it for \$480 one month later (MCDR E:321). This means that Clemens received \$15.75/acre for his 160 acres. Unimproved land at this time probably was worth about \$2/acre and certainly less than \$5/acre during that depression period. Ira Stout sold the 80 acres containing the mill site to George T. Cannon of Jefferson County, Kentucky, in September, 1840, for \$1600 (MCDR E:394), or \$20/acre, thus indicating the presence of a valuable structure. Sale of Clemens' house and other land to Stout marks Clemens' departure for Hannibal in the fall of 1839.

In 1837, there were 60 families in Florida and "an extensive hemp manufactory" was "nearly completed" there (Wetmore 1837:120-121). In 1840, there were 209 free and 72 slave inhabitants in Florida, plus 7 stores and 21 "manufacturing" businesses, according to the census

for that year. Paris at that time was similar, having a population of 218 plus 71 slaves, 6 stores, and 21 "manufacturing" businesses.

Three more towns were founded in Monroe County during the period of economic expansion and land speculation that culminated in the Panic of 1837. The towns of Clinton and Jonesburg were platted on August 2, 1836, and September 19, 1836, respectively (MCIDR B:400, 419). Clinton and Jonesburg were competing towns with only an alley separating them, both located in Section 33 of T56N, R9W, on the North Fork of the Salt River (Figure 3). Clinton was platted by George Glenn, Spotswood S. Williams, and Samuel Bryan. Glenn was a merchant with stores in Middle Grove and Paris. A mill and ferry (operated by Williams) were located near the town, which consisted of 48 lots arranged along one street that led to the ferry at the river. A grocer's license was issued for Clinton in February, 1837 (MCCR A:443).

Jonesburg was platted by Gabriel Jones and Greenlee Hays and had 81 lots arranged around a central town square (MCIDR B:419). A grocer's license was issued to Gabriel Jones for a store on the "north part of Salt River" on August 1, 1836, so it appears that a store was in operation before the town was platted (MCCR A:33). Another grocer's license was issued to Lewis Saunders in February, 1837, and a merchant's license was issued to Gabriel Jones and Company of Jonesburg in May, 1837 (MCCR A:443, 533). The competition between the two towns is reflected in conflicts over the routes of proposed county roads. Both groups of town proprietors wanted county roads to run through their town and not through the other (MCCR A:431). In Clinton 27 of the 48 lots had been sold by 1840 and in Jonesburg, 57 of the 81 lots had been sold (including two blocks containing 21 lots to Gough and Gough). In 1840 there were three stores in Clinton-Jonesburg and 11 "manufacturing" concerns (Monroe County Census 1840). Combined population of the two towns in 1840 was 83 plus five slaves.

The third town founded at this time was Santa Fe, located on the South Fork of the Salt River in Section 17 of T53N, R8W (Figure 3). Santa Fe was platted on October 6, 1836, by John Bybee (MCIDR B:427), a doctor who had moved from Boone County, Missouri. Santa Fe consisted of 84 lots with 2 lots reserved for a meeting house (MCIDR B:427). By 1840, there were one store and five "manufacturing" businesses (Monroe County Census 1840), and a population of 24 plus three slaves.

Four towns were platted in western Ralls County in the 1830s: Newport, Cincinnati, Bloomfield, and Ralls Town (Figure 3). The first three were platted in 1834 and were located on the banks of the Salt River. Ralls Town, located on the edge of the upland prairie, was platted in 1839. It is interesting that these towns were not founded

during the major period of land speculation in 1835 and 1836.

Newport was the original name of Joanna, located on the north bank of the Salt River in the northeast quarter of Section 22, T55N, R7W (Figure 3). Newport was platted sometime between January 10, 1834, when the land was purchased by John J. Lyle, and May, 1834, when Newport is mentioned in the description of a road established by the Ralls County court (RCPBOE; RCRR A:36). The exact date is not known since no plat was filed in the county deed records. There were only two purchases of lots in Newport. The first recorded sale was to Allen Rouse, a Methodist minister, who on January 8, 1835 (RCIDR C:132, Ralls County Census 1850), bought a lot on Main Street for \$6.37. The second purchaser was Charles L. Taylor who bought a lot on Water Street on September 13, 1836, for \$20.37 (RCIDR C:188). In 1838, Taylor owned three other lots, but there is no record of their sale by Lyle (RCIDR D:69). Taylor was a merchant as shown by a July 12, 1837, mortgage for \$4000 taken out on all his property in Newport, including the stock of goods and groceries in his store (RCIDR C:265). Taylor, who may have been the only resident of Newport besides Lyle, defaulted on his mortgage and his four Newport lots were sold by the sheriff to Thomas L. Anderson of Marion County on July 3, 1838, for \$87. No other lots were sold through 1878, although William Greathouse, who probably was Lyle's father-in-law, bought one-third interest in all unsold Newport lots and the 40-acre parcel in which Newport was located on February 24, 1841, from Lyle for \$100 (RCIDR D:231). In 1856 Greathouse sold his interest to Henry Snyder of Ralls County for \$100 (RCIDR D:231). Snyder also acquired Lyle's and Anderson's interests and sold the entire plat of Newport and 80 acres surrounding it to George Newell of Pike County, Illinois, on October 7, 1865, for \$550 (RCIDR Q:42). Newell still owned this land in 1878 (Edwards Bros. 1878).

Cincinnati was platted on June 5, 1834, by David Blue in Section 8 of T55N, R6W, on the north bank of the Salt River (Figure 3), where a county road, established in 1828, forded the river (RCRR A:12, RCIDR B:317). Blue, who classified himself as a farmer in the 1840 census, purchased the land on May 8, 1833, and May 13, 1834 (RCPBOE; Ralls County Census 1840). The original plat contained four blocks of 8 lots each and two half-blocks of 4 lots each. One half-block was made into a full block, another half block was laid out, and 3 smaller lots were laid out along Main Street, when an addition to the plat was filed on May 1, 1836 (RCIDR C:1). On August 31, 1836, another block and a half were platted (RCIDR C:91), making a total of 63 lots. Although these additions to the plat might indicate that Cincinnati was a successful, expanding town, only 28 of

the 63 lots had been sold by 1844 when David Blue died. All original sales of lots took place between 1835 and 1838. The additions to the plat are more understandable when it is noted that they were made during the height of land speculation in 1836. Cincinnati was a moderately successful town, however, since in 1837 there were two stores, one tavern, a post office, and a Catholic chapel (Wetmore 1837:155).

Bloomfield was platted by William C. Phelps on October 30, 1834, on the north bank of the Salt River in Section 33, T56N, R6W (Figure 3). It consisted of four blocks of eight lots each, and was located across the river from the Walker steam mill, owned by William Muldrow and John McKee, two wealthy speculators from Marion County (RCDR B:348, C:359). McKee and Muldrow bought Bloomfield from Phelps and sold it along with a half-interest in the mill to Andrew Woods on August 7, 1837, for \$7000 (RCDR C:359). Woods defaulted on a mortgage on this property on July 7, 1840, and it was purchased by Foster Ray of Marion County at a sheriff's sale for \$489.05 (RCDR D:592). The property passed back to McKee in 1849 (RCDR N:505). There is no record of any lots in Bloomfield having been sold through 1860.

Shelby County was formed from the western part of Marion County in January, 1835. The southeastern part of Shelby County is within the project area (Figure 1) and is drained by the North Fork of the Salt River. A correlation of land purchase and census data demonstrates there were no settlers in this area in 1830. According to the county history (NHC 1884:626), the first settlers arrived in what was to become southeastern Shelby County in late 1831 and 1832. Settlement must have proceeded rapidly after 1831 since, after only four years, population was sufficiently high to warrant formation of Shelby County. A store and post office were established in 1834 at Oak Dale, located in Section of T57N, R9W (outside the project area) (NHC 1884:629). The first county court met at Oak Dale, but the commissioners appointed by the state to locate the county seat chose the site of Shelbyville (also outside the project area), where land was probably donated by Thomas J. Bounds, the county clerk, who also was appointed county seat commissioner (NHC 1884:643-644). Bounds presented the plat of Shelbyville to the county court in December, 1835, and the county court held its first meeting in Shelbyville in July, 1836. The courthouse was completed in December, 1838. In 1836, there was a store and tavern at Oak Dale and two stores in Shelbyville (NHC 1884:44-45). Wetmore (1837:220) reported that Shelbyville was "in its infancy" in 1837 and

contained two mercantile houses.

Audrain County was established on December 17, 1836, and was formed from territory that had been administratively attached to Monroe and Callaway counties (NHC 1884:41; MCDR B:263). The county seat, Mexico (Figure 1), was platted as a town on April 2, 1836, before the county was formed, by James H. Smith and Robert C. Mansfield (MCDR B:263). This James H. Smith is probably the same person as the Monroe County James H. Smith—who had a blacksmith shop on the New London-Fayette road near Paris in the early 1830s (see above)—since he had a blacksmith shop in Mexico when he died in 1847 (MCPR, Box 48).

Increasing population in Monroe County during the 1830s made necessary the creation of new political townships in addition to the three established in 1831 (Figure 3). Washington Township was formed in August, 1833, and was located in the northeast and northcentral parts of the county (MCCR A:55). South Fork Township was located in the southeastern part of the county and was created in June, 1834 (MCCR A:113), and Marion Township, located in the western part of Monroe County (outside the project area), was formed in March, 1835 (MCCR A:192). Indian Creek Township was formed in the northeastern part of the county in November, 1839 (MCCR B:155). New political townships were also formed in Ralls County in the 1830s: Saline Township in the northwest, Clay in the north-central, and Jasper in the southeastern part of the county (Figure 3).

From the above, it can be seen that the decade of the 1830s was a period of rapid economic and political development in the project area. The founding and growth of towns and political subdivisions was accompanied by construction of county road systems that made most areas accessible to wagons and facilitated farm to market transactions (see Chapter 5). Development of the area was promoted by rapid in-migration during the 1830s, which increased population density from about two persons/mi² in 1830 to 11 persons/mi² in 1840. Some of these new settlers probably were attracted by early road and town construction, so that economic development and local improvements were related to population density increases in a positive feedback cycle. Increases in population density, as reflected in land purchasing patterns, are examined in Chapter 4, and both town development and occupational specialization are studied further in Chapter 6. The origins and cultural background of these settlers are discussed in the next chapter.

CULTURAL BACKGROUND AND DEMOGRAPHIC CHARACTERISTICS OF SETTLERS

ORIGINS OF SETTLERS

Settlers in the Boon's Lick area along the Missouri River were primarily from Kentucky and Tennessee, bringing to Missouri an "Upper South tradition" (Voss 1969-1970) that affected their political, social, and economic decisions. Settlers in the Salt River area of northeast Missouri also were primarily from the upper South, especially from the states of Kentucky and Virginia. A study of biographies in county histories (Holcombe 1884; NHC 1884; Owen 1895) and of places of residence given on land patents (see Chapter 1) provides a sample of origins of settlers (residents as defined in Chapter 1) of the project area by county (Table 1). Locations of these counties and the number of families from each county are shown in Figure 5, along with probable migration routes to the project area. Circled numbers in Figure 5 indicate the number of

families from a state for which no specific county of origin is known. Table 2 lists counties in Missouri given as previous residences of settlers of the project area. Locations of these Missouri counties are shown in Figure 5.

Sixty-three percent of families in the project area for which a specific county of origin is known were from a 34-county area (marked with the letter *b* in Table 1), known as the Bluegrass region of Kentucky, as defined by Davis (1927:Figure 6). This area surrounding Lexington was the first area in Kentucky to be settled as a result of the westward expansion of settlement from piedmont Virginia during the colonial period. By 1820, population densities in the Bluegrass counties had reached 25-40 persons/mi² (calculated from Flint 1970, II:181-182), which probably contributed to further westward expansion to the Boon's Lick area of Missouri during the period of economic prosperity following the end of the War of 1812. This migration probably followed the

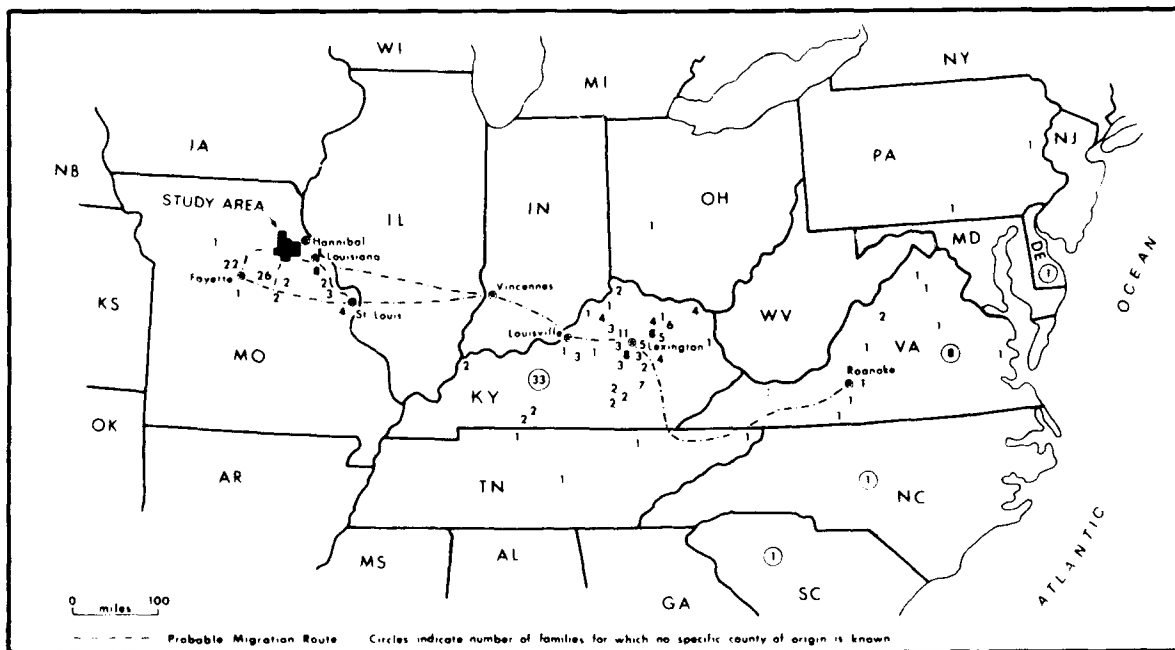


Figure 5. Map showing origins of settlers and probable migration routes (-----) to the project area. Circles indicate number of families for which no specific county of origin is known.

TABLE 1.
Origins of Settlers by Number of Families
per County, According to Patents and
Published and Unpublished Sources^a

County	State	Patent	Published	Total
Anderson ^b	Kentucky	1		1
Bath ^b	Kentucky	2	4	6
Boone ^b	Kentucky	1	2	3
Bourbon ^b	Kentucky	4	4	8
Bullett	Kentucky	1		1
Casey	Kentucky		2	2
Clark ^b	Kentucky	1	4	5
Fayette ^b	Kentucky	2	3	5
Franklin ^b	Kentucky	2	1	3
Garrard ^b	Kentucky	1	1	2
Green	Kentucky	1	1	2
Greenup	Kentucky	1	3	4
Harrison ^b	Kentucky	1	2	3
Jessamine ^b	Kentucky		3	3
Lawrence	Kentucky	1		1
Lincoln	Kentucky	5	2	7
Madison ^b	Kentucky	1	3	4
Marion	Kentucky	2		2
Mason ^b	Kentucky	1		1
Mercer ^b	Kentucky	7	1	8
Nelson	Kentucky	2	1	3
Nicholas ^b	Kentucky	1		1
Oldham ^b	Kentucky	1		1
Owen ^b	Kentucky		1	1
Scott ^b	Kentucky	7	4	11
Shelby ^b	Kentucky	3	2	5
Simpson	Kentucky		2	2
Union	Kentucky	1	1	2
Warren	Kentucky	1	1	2
Washington ^b	Kentucky		3	3
Woodford ^b	Kentucky	1	2	3
Fentress	Tennessee		1	1
Robertson	Tennessee	1		1
Rutherford	Tennessee	1		1
Sullivan	Tennessee	1		1
Augusta	Virginia		2	2
Bedford	Virginia		1	1
Caroline	Virginia		1	1
Franklin	Virginia		1	1
Louisa	Virginia		1	1
Page	Virginia	1		1
Patrick	Virginia	1		1
Rockbridge	Virginia	1		1
Tazewell	Virginia	1		1
Franklin	Pennsylvania	1		1
Northampton	Pennsylvania		1	1
Champaign	Ohio	1		1

^aSources: National Historical Company 1884; Holcombe 1884; Henning n.d.; Owen and Company 1895.

^bCounties located in Bluegrass region of Kentucky, according to Davis (1927).

wagon road (a regular stage route by 1837 [Peck 1837:378]) from Louisville through Vincennes to St. Louis and then up the Missouri River to the Boon's Lick area. Others may have traveled by steam boat down the Ohio River from Louisville and then up the Mississippi to St. Louis.

The Boon's Lick area was largely settled by 1820 and the best land was sold during the first public land auctions, held in 1818 and 1819. Late arrivals probably began exploring the area to the north and became aware of the Salt River valley. One such exploring party, from Bourbon County, Kentucky, traversed the area in 1817 (Holcombe 1884:143; see Chapter 2). Descriptions of the Salt River area reaching families dissatisfied with opportunities in the Boon's Lick area of Missouri and the Bluegrass region of Kentucky influenced them to migrate to the project area and resulted in the pattern of migration shown in Figure 4. Information about the area probably was disseminated primarily through kinship networks. An example of a letter describing the area to relatives "back home" is that of Richard D. Powers (1931).

TABLE 2.
Previous Missouri Counties of Residence of
Settlers by Number of Families per County,
According to Patent Information

County	Number of families
Boone	26
Callaway	12
Cole	2
Cooper	1
Chariton	1
Howard	22
Lincoln	2
Pike	8
St. Charles	3
St. Louis	4

THE UPPER SOUTH CULTURAL TRADITION

Since most settlers of the project area came from one region of Kentucky, they probably formed a relatively homogeneous group that shared a similar cultural tradition, that of the upper South. As mentioned above, Voss (1969-1970:212-213) describes settlers of the Boon's Lick area of Missouri as participating in an upper South cultural tradition. Power (1953:93-109) characterizes emigrants from Kentucky as bearers of a "corn and hog

culture" and Newton (1974:152) lists important "pre-adaptive traits" of "Upland South Culture." Mitchell (1972a:740) defines a pre-1860 upper South agricultural region consisting of the states of Maryland, Virginia, North Carolina, Kentucky, Tennessee, and Missouri, and a similar agricultural region has been defined by Jordan (1967). Kniffen (1965) defines essentially the same area on the basis of the diffusion of rural house types. A discussion of the upper South cultural tradition as expressed in the Bluegrass region of Kentucky occupies the remainder of this section.

Kentucky originally was part of the colony of Virginia and was settled primarily by people from there, beginning before the Revolutionary War. Early settlements were established during the 1770s at Harrodsburg, Boonesborough, and Logan's Camp (Flint 1970, II:210). The county of Kentucky was formed by the Virginia legislature in 1776 with Harrodsburg as the county seat. Lexington and Danville were founded in 1779 and a land office was opened in the same year. Kentucky land was offered for sale by the government of Virginia for £40/100 acres and a land court was established to adjudicate conflicting claims (Gray 1958:622). In 1780, the price was increased to £160/100 acres. No system of land survey was established and boundaries were described vaguely by the "metes and bounds" system. In some cases three or four land warrants were issued for the same piece of land, causing endless litigation (Flint 1970, II:21). Most grants were large, which tended to concentrate land in the hands of a few who later resold it at a profit to actual settlers. Sixty percent of land grants were for parcels of 1000-5000 acres and an additional four percent of the grants were for parcels of 5000-10,000 acres (Gray 1958:624).

In 1792, Kentucky became the first state formed west of the Appalachians. Lexington, located in the center of the Bluegrass region, developed as a distribution center for imported manufactured products. In 1802, 70% of all manufactured products came from England (Michaux 1904:203), although local production of clothing, paper, leather, spinning wheels, and hats had begun by 1800 (Gronert 1919:31).

The Bluegrass area participated in the triangular trade characteristic of the early Midwest before the advent of the steamboat (Atherton 1939:91; Wade 1959:39). Agricultural products were floated downstream on flatboats for sale at New Orleans, where the proceeds were used to buy cotton and sugar that were shipped to the Northeast by sea. Sale of these commodities in Philadelphia and other cities allowed purchase of English manufactured goods that were transported by wagon to Pittsburgh. From there, where locally produced iron and glass products also were available, goods were floated down the Ohio River to Maysville, Kentucky, and then were transported over-

land to Lexington merchants.

The beginning of two-way steamboat transport on the Ohio and Mississippi Rivers stimulated the development of Louisville on the Ohio River as a port and commercial distribution center during the 1820s. Lexington was unable to compete with Louisville, due to its inland location (Wade 1959:169). Before 1820, Lexington had six bagging factories and numerous ropewalks for hemp processing (producing material for cotton baling in the South), plus brass and iron foundries, and woolen, cotton, and paper mills. During the 1820s, most of these industries disappeared (Gronert 1919:321). While other western towns recovered after the Panic of 1819, Lexington did not, due to the movement of commercial distribution points to the Ohio River (Wade 1959:169). In the 1820s, Lexington had lost its commercial leadership, but was trying to establish itself as a cultural center revolving around Transylvania University, which came to be known as the "Harvard of the West" (Wade 1959:185, 234).

Kentucky was part of an upper South agricultural and sociocultural region as defined by Mitchell (1972a:740; 1978:76, 83-86). The central portions of both Kentucky and Tennessee "were key locations in the interior expansion of upper Southern cultural landscapes" (Mitchell 1978:76). Kentucky and the upper South in general were characterized by mixed farming with a balanced system of crops and livestock including corn, wheat, rye, tobacco, hemp, flax, hogs, beef cattle, and horses, supplemented by vegetables such as peas, beans, okra, collards, and turnips (Newton 1974:152). Society was more class-structured than in the North, due to the presence of slaves, which created a class of wealthier small planters who grew tobacco and hemp (Mitchell 1978:83). Upper South culture began to develop in western Virginia, especially in the Shenandoah Valley, where the fusion of elements from the southeastern Pennsylvania "hearth area" (corn, wheat, hogs, and beef cattle) with elements from the Chesapeake "hearth" (tobacco, hemp, and slavery) occurred (Mitchell 1972a:741; 1978:81-82). Upper South culture was carried by emigrants from western Virginia to central Kentucky. The practice of fattening cattle on corn during the winter, which later became characteristic of the corn belt north of the Ohio River, probably began in western Virginia (Mitchell 1978:84).

Corn and pork could be produced by all farmers in central Kentucky, whether they owned slaves or not, and quantities of these commodities in excess of that necessary for local consumption could be shipped down river to New Orleans, forming the basis of a market economy in Kentucky. Those farmers who had slave labor available to them soon began to produce more commercial crops such as tobacco and hemp. Tobacco production was stimulated by high prices during the

inflationary period of 1815-1819, but when tobacco prices declined after 1820, many farmers switched to hemp production, which benefited from high prices between 1826 and 1828 (Gray 1958:876-877). The production of tobacco and hemp with slave labor, along with a more diversified group of food crops, differentiates the upper South from the North, which had no slaves and had wheat rather than corn as its principal grain. The upper South is differentiated from the lower South by the ratio of nonfood cash crops to food crops and the number of slaves present. The lower South was characterized by the development of a plantation economy specializing in cotton production using large quantities of slaves, although slaveless yeomen farmers also were present (Owsley 1949).

The 1830s in the Bluegrass region saw a shift from commercial production of tobacco and hemp to livestock production (Gray 1958:877). Horses and mules were bred for sale to the lower South and West and cattle were fattened on bluegrass and corn stalks, then driven to eastern markets (Henlein 1959). Pasture was created by sowing bluegrass on exhausted crop lands and in woodlands. Trees were not closely spaced since, as Braderman (1939:452) notes, the woods made excellent pasture when the underbrush was cleared. The shift to stock raising required larger farms and in the 1830s stockmen bought the land of many tobacco and hemp producers (Gray 1958:877). Bourbon County, Kentucky, exports in 1835 emphasized livestock and corn (as whiskey and feed for livestock): 40,000 hogs, 10,000 cattle, 3000 horses and mules, \$50,000 worth of bacon and lard, and \$70,000 worth of whiskey were produced (Gray 1958:877).

Although tobacco, hemp, cattle, and horses were commercially viable agricultural products for men of means (who usually owned slaves), the majority of the population of the Bluegrass region supported themselves by raising corn and hogs. Early Kentucky society was based on "corn and hog culture" and a diet that consisted mainly of pork and cornpone (Power 1953:109). Hogs often ran wild in the woods in herds of hundreds, but were fed on corn before slaughtering (Bidwell and Falconer 1925:167). Corn was fed to cattle and hogs and distilled into whiskey, and was marketed in these forms rather than as grain due to high transportation costs (Bidwell and Falconer 1925:349). In 1840, corn was worth more than all other crops in central Kentucky (Bidwell and Falconer 1925:342).

Power (1953:93-109) describes poor pioneers from Kentucky in Indiana and Illinois in terms of the characteristic hog and corn culture, a lack of hay (since cattle could be fed corn stalks in the winter), a lack of manuring, and little interest in orchards or dairy products. Farmstead layout was irregular, with log houses not oriented to the road. There were few barns

and little shelter was provided for stock. Regarding manuring, Bidwell and Falconer (1925:342) note that the custom of feeding corn to cattle grazing in woodland pasture meant that all manure was wasted in the woods. "As late as the beginning of the fifth decade [of the nineteenth-century] there was said to be comparatively little interest in fertilizers in Kentucky" (Gray 1958:807). It is probable that the strategy of most farmers was to purchase enough land to be able to put virgin land or land that had long been fallow into production to replace land exhausted by continuous cropping.

Upper South agricultural technology was based on wood (McManis 1964:90), especially in frontier areas, where it was used by farmers to make houses, furniture, tools, and wagons (Bidwell and Falconer 1925:162). In early nineteenth-century Kentucky, corn fields were plowed first with a light wooden moldboard plow, and sometimes a wooden harrow was used to complete soil preparation (Bidwell and Falconer 1925:342). Seeds were planted by hand and covered with a hoe. Cultivation was carried out with a shovel plow. The number of cultivations, and whether or not hand hoeing was carried out, depended on weed growth and the initiative of the farmer. By 1840, farm machinery was "still largely the product of the farm or local blacksmith shop" (Bidwell and Falconer 1925:281). The major innovation in the North by this time was the cast iron plow, which began to replace the wooden moldboard plow, reducing human and animal labor requirements and decreasing plowing time per acre (Bidwell and Falconer 1925:282). However, it is not known whether cast iron plows were a factor in the expansion of upper South agricultural frontiers. According to Rubin (1975:364), in the upper South, "the direction of agricultural change followed that of commercialized Northern agriculture, though often with a considerable delay." The most important innovation in agricultural technology was the steel plow, invented by John Deere in 1837, which made cultivation of prairie much easier since it did not stick in heavy prairie soils (Bidwell and Falconer 1925:283). Steel plows were introduced into Kentucky in 1845 and were widespread in the Midwest by 1850. Factory-made steel plows began replacing plows fashioned by local blacksmiths in the 1850s (Bidwell and Falconer 1925:28).

The upper South developed a characteristic house construction style in both log and frame construction. German log construction techniques and the English "I-frame" house style, which diffused throughout the upper South, originated in southeast Pennsylvania (Kniffen 1965:561). Log houses were built only as temporary structures in the North, but were constructed as permanent houses by many in the upper South, where the use of corner notching techniques, especially half-dovetail and V-notching, produced permanently locked box corners that could be covered with

siding (Kniffen and Glassie 1966:56). Larger upper South frame houses were usually "I-houses" that were two rooms wide with a central hall, one room deep, and two stories tall. Replacement of a log house with a frame "I-house" usually signified attainment of small planter status:

Early in its movement southward the "I" house became symbolic of economic attainment by agriculturalists and remained so associated throughout the Upland South and its peripheral extensions [Kniffen 1965:555].

Barns usually were small log crib barns that later were replaced by heavy frame transverse-crib barns, which became the dominant upper South barn (Kniffen 1965:565).

The upper South also had a characteristic social structure (Elkins and McKittrick 1954:567-572). The presence of slavery "provided a different framework for social evolution than that farther north" (Mitchell 1978:86) and produced a more class-structured society:

A landholding elite of larger planters and ambitious yeomen about to enter the planter ranks provided a traditional leadership structure for the conduct of political and civic affairs. Life was more oligarchic than egalitarian; liberal individualism was an ideology less widely shared by the smaller yeomen, the poor white, and most obviously, the slave.

Mitchell (1978:86) also notes that towns were less important in Kentucky than in Ohio and that Kentucky tended to have fewer professional people, craftsmen, churches, and schools.

The dream of most emigrants from the upper South was to become a member of the planter class or landed gentry and to found a leading family on a large tract of land (Voss 1969-70:212). This socially and politically dominant class established small plantations and aspired to live a life of refinement and ease. The center of the estate was a two-story country home or "mansion" (probably a large "I-house"), and wealth was based on tobacco, hemp, or blooded stock (Voss 1969-70:213). The most important basis of wealth, however, was land. Most Southerners shared the conviction that "the ownership of land was both a means to, and a mark of, success" (Anderson 1938:179).

Slave ownership probably was more important for its prestige value than for its economic contributions. In early Kentucky slaves and owners worked together (Braderman 1939:451). In Missouri the ownership of slaves seems to have been a mark of greater wealth and higher social position, rather than the basis for a distinct economic system of special products (Viles 1920:40). Slave owners "set the tone and determined atmosphere" and slave owners "with some capital came into the virgin wilderness, secured the more desirable land and to a surprising degree furnished the political leadership"

(Viles 1935:13). Trexler (1914:19), quoting an "old-timer," states that "every decent Missouri family had at least one slave, and usually from two to four, as house servants." However, possession of six or more slaves entitled one to be addressed as "colonel" (Gray 1958:874). Trexler also states slavery was "much more a domestic than a commercial institution," and that masters and slaves worked in the fields and in the house together (Trexler 1914:19). However, slaves did make a significant economic contribution to tobacco and hemp production. Tobacco production provided constant (year-round) labor for small numbers of slaves, who required close supervision (Gates 1960:103), and hemp required heavy labor in breaking, drying, pressing, and baling operations from December through April (Gates 1960:116). Consequently, production of these cash crops probably was restricted to the more well-to-do or "gentry" class who owned more slaves than the usual few household servants.

Immigrants to the Salt River area of Missouri thus possessed a relatively homogeneous cultural background formed in the Bluegrass region of Kentucky. This upper South culture was based on corn and hog production and a wood-oriented technology. It emphasized acquisition of land and slaves as a means to gain social status and to become one of the rural landed gentry. The above summary of Bluegrass economic and cultural characteristics suggests reasons for migration west. Some of these might have been the uncertainty of land titles and lack of available land that may have been tied up in large estates. Formation of large estates may have accelerated during the early 1830s as stockmen bought out smaller general farmers. Sale of smaller farms may have been connected with soil depletion resulting from continuous cropping without manuring or fertilizing. Rather than undertake such operations, small farmers may have preferred to sell their land and seek virgin lands in the West. Rising land values connected with the general economic expansion of the late 1820s and early 1830s may have made sale of the home place in Kentucky economically feasible. Finally, the opportunity to acquire large amounts of inexpensive public land in Missouri probably was a method for satisfying aspirations of becoming "landed gentry." The physical environment to which the Kentucky Bluegrass population was adapted will be discussed in Chapter 4 when factors that conditioned location of land purchases are discussed.

DEMOGRAPHY AND SOCIAL ORGANIZATION OF SETTLERS

Most settlers arrived in the project area as parts of

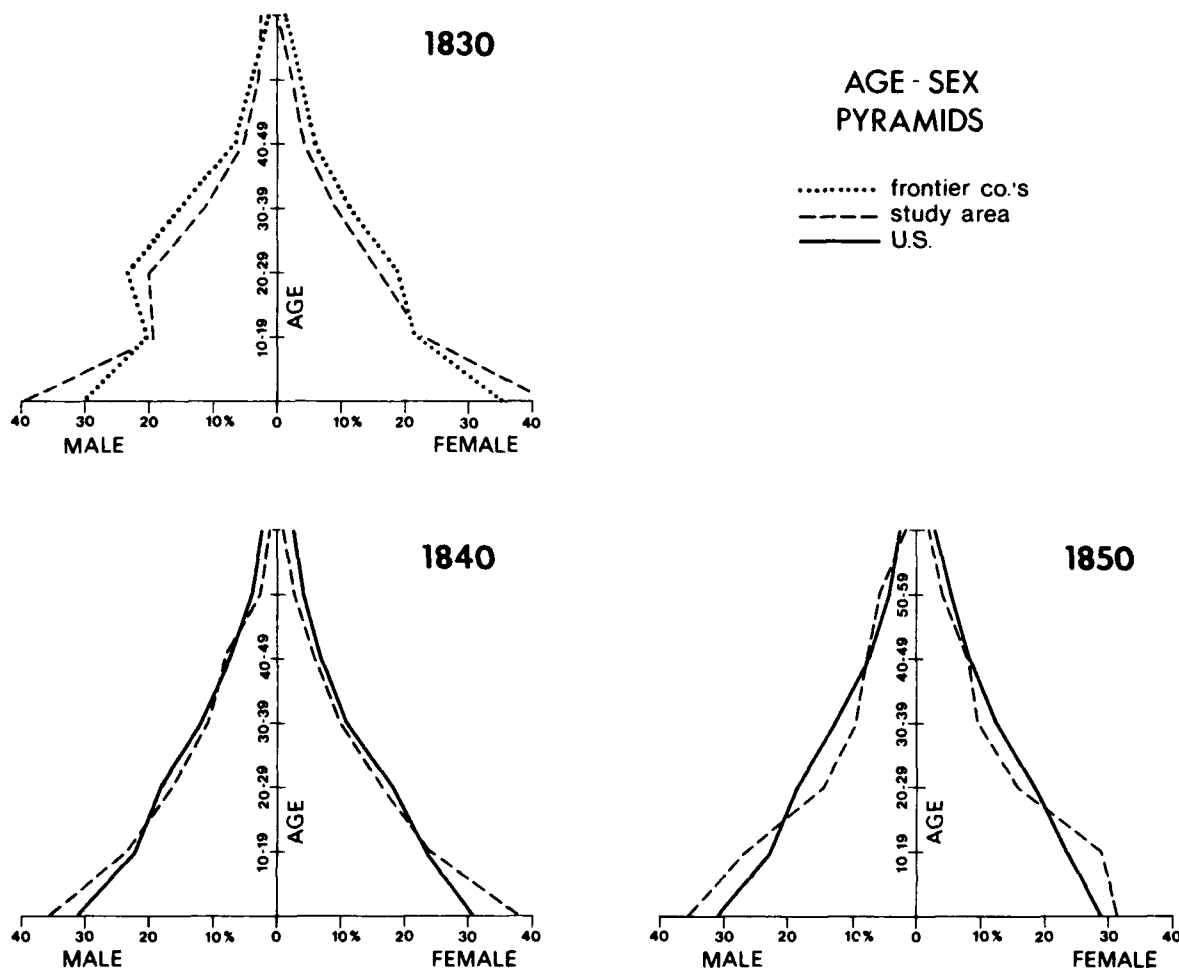


Figure 6. Graphs showing the age-sex distributions of the population of the project area for the years 1830, 1840, and 1850.

social units: families that acted as corporate groups in the development of the region. Although many students of the frontier in America have suggested that the agricultural frontier was composed of a disproportionately high number of single young men (Eblen 1965: 399; Peterson 1961:629), a statistical study of census information from nonslave frontier agricultural counties in the period 1840-1860 has demonstrated that the percentage of men between 20 and 40 was only 20-25% higher than the national average, and that only one-third of them were unmarried (Eblen 1965:412-413). A demographic analysis of the project area shows that single young men played even less of a role in an upper South frontier with slaves, and that large, sometimes extended, families were the basic social and economic units.

The age-sex distributions of the population of the project area for the years 1830, 1840, and 1850 are summarized in Tables 3-5, and are shown as age-sex pyramids in Figure 5. The populations for 1830 and 1840 are composites of data for Ralls County and Monroe County political townships located within the project area.¹ Since some of these political townships extend beyond the boundaries of the project area, the totals include people living outside the area, especially for 1840. However, the percentages and sex ratios probably

¹These townships are Salt River and Jackson in 1830; Salt River, Saline, Jefferson, South Fork, Indian Creek, Washington, and Jackson in 1840 (see Figs. 2 and 3 for locations).

are fairly representative of the project area. The figures for 1850 represent an attempt to conform to the boundaries of the project area, excluding Shelby County, as discussed in Chapter 1.

Tables 3-5 and Figure 5 also provide further comparative data. The 1830 population of the project area is compared to Eblen's (1965: Table 1) average frontier agricultural county. This is a statistical composite based on data from 88 counties located between Lake Michigan and the Pacific Coast for the period 1840-1860. The data were obtained from the first census taken after the initial settlement of each county. All counties used by Eblen were in nonslave states and territories.

The 1840 and 1850 populations of the project area are compared to the population of the United States as a whole in Tables 4 and 5 and in Figure 5. Figure 5 shows that the percentage of children under 10 years of age was much higher in the project area in 1830 than in the average northern frontier county, and that the percentage of males 20-29 years of age was less than that

TABLE 3.

**Age-Sex Distribution of the
Project Area Population in 1830
Compared to the Age-Sex Distribution
of the Population of the Average (Non-Slave)
Frontier Agricultural County^a**

Project area					
Age group	Males		Females		Sex ratio
	Number	Percent	Number	Percent	
0-9	245	39.1	242	42.8	101
10-19	119	19.0	132	23.4	90
20-29	123	19.6	95	16.8	129
30-39	73	11.6	53	9.4	138
40-49	32	5.1	25	4.4	128
50-59	19	3.0	13	2.3	146
60-69	14	2.2	2	0.4	700
0-69	625	99.6	562	99.5	111
All ages	627	100.0	565	100.0	111

Frontier agricultural counties					
Age group	Males		Females		Sex ratio
	Number	Percent	Number	Percent	
0-9	289	29.8	274	35.3	106
10-19	191	19.7	172	22.2	111
20-29	224	23.0	152	19.6	147
30-39	147	15.1	89	11.5	165
40-49	69	7.1	49	6.3	141
50-59	34	3.5	29	3.7	116
60-69	16	1.6	10	1.3	160
0-69	970	99.8	775	99.9	125
All ages	971	100.0	776	100.0	125

^aSource: Eblen 1965: Table 1.

TABLE 4.

**Age-Sex Distribution of the
Project Area Population and Adjacent Areas
in 1840 Compared to the Age-Sex Distribution
of the Population of the United States in 1840**

Project area					
Age group	Males		Females		Sex ratio
	Number	Percent	Number	Percent	
0-9	1377	35.7	1307	38.0	105
10-19	902	23.4	841	24.4	107
20-29	649	16.8	557	16.2	116
30-39	429	11.1	359	10.4	119
40-49	294	7.6	204	5.9	144
50-59	118	3.1	102	1.0	116
60-69	51	1.3	45	1.3	113
0-69	3820	99.0	3415	99.2	112
All ages	3852	100.0	3441	100.0	112

United States					
Age group	Males		Females		Sex ratio
	Number	Percent	Number	Percent	
0-9	2294793	31.6	2190259	31.5	105
10-19	1635636	22.5	1628853	23.5	100
20-29	1322453	18.2	1253490	18.1	106
30-39	866452	12.0	779120	11.2	111
40-49	536606	7.4	502183	7.2	107
50-59	314528	4.3	304852	4.4	103
60-69	174238	2.4	173329	2.5	101
70-79	80067	1.1	80565	1.2	99
0-79	7224773	99.5	6912651	99.6	105
All ages	7261078	100.0	6940413	100.0	105

characteristic of northern frontier counties. There also were a few more older men (60-69) in the project area in 1830 than in northern frontier counties. These data are consistent with the hypothesis that settlement of the project area was primarily by families. The low percentage of persons, especially males, 10-19 years old probably can be explained by the fact that most families were young and would not have had many children in this age group. The slightly higher percentage of females in this age group probably is due to the arrival of some of them in the region as wives of 20-29-year-old men.

The age-sex pyramids of the project area for 1840 and 1850 are similar to those of the United States as a whole, except for the higher percentages of children in the project area (Figure 5). In 1840, the 10-19-year-old age group expanded and slightly exceeded the national average, as young children (0-9) present in 1830 moved into the next higher age group. The high percentage of children 0-9 years old in 1840 probably represents a frontier "baby boom." By 1850, the effects of this baby boom can be seen in the 10-19-year-old age group while

the percentage of children 0-9 years old declines from 37% in 1840 to 31% in 1850. Evidence for a frontier baby boom also can be found in fertility ratios (number of children under 5 divided by number of females 15-39). In 1830 the fertility ratio was 139.3, declining to 111.8 in 1840, and to 79.2 in 1850.

Figure 6 shows sex ratios (number of males divided by number of females) by age group for the project area in 1830, 1840, and 1850, and, for comparison, sex ratios for Eblen's average northern agricultural frontier county and for the United States as a whole for the period 1840-1860 (Eblen 1965:Figure 6). In general, sex ratios for the project area fall between those of northern frontier counties and those of the United States as a whole. The sex ratio curve for the project area in 1830 is similar in shape to that of the frontier counties but is lower in magnitude, indicating that the number of single young men was not as great in the project area as in northern frontier counties. It also is of interest that the highest sex ratio for 1830 in the project area is the

30-39-year-old group, rather than the 20-29-year-old group, as in the northern agricultural counties. This may indicate that a somewhat older group of male immigrants settled the project area than settled northern frontier counties. In succeeding censuses (1840 and 1850), this same male age group (who were 30-39 years old in 1830) continues to outnumber females of the same age, while the rest of the sex ratio curve is similar to the national average. Perusal of the manuscript census schedules shows that most of these men were married to younger women. The low sex ratios in the 15-19-year-old group in 1830 and 1840 probably are due to greater numbers of females in this age group who arrived as wives of older men, as discussed above.

The age distribution of male heads of households (Table 6) for 1830 shows that immigrating males were by no means all youthful. There were almost as many household heads in their 30s as in their 20s, while men over 40 accounted for 31% of household heads. Heads of households in their 20s decreased from 36% in 1830 to 13% in 1850, and the percentage of household heads over 40 increased to 9%.

A frequency distribution of numbers of persons per household in 1830 (Table 7) indicates most families were fairly large (averaging 5.6 persons) when they arrived in the late 1820s. Thus, most male immigrants arrived with already established families, which is in accord with the age structure of male heads of households shown in Table 6. The very low number of single-person households shown in Table 7 indicates whatever unmarried men were present were members of larger families or households. It is probable that being the head of a household meant owning land, since 86.4% of all heads of household appearing in the 1830 censuses of Salt River and Jackson townships were purchasers of federal public land. Combining this information with the data on household size from Table 7, it is apparent that most early settlers of the project area were members of large households, with the head of the household owning land. This pattern continued in 1840, when 70% of the heads of rural households in Jefferson Township (located entirely within the project area) were purchasers of federal land. The actual percentage of land owners probably was higher, since some of the remaining 30% probably bought land that already had passed out of the public domain.

A study of the manuscript census schedules shows that the large households shown in Table 7 were composed of large nuclear families and, sometimes, joint families (i.e., composed of more than one marriage). Although the 1830 and 1840 manuscript census schedules do not list names (other than that of the head of the household) and do not indicate how household members are related, the distribution of ages and sexes does indicate that most households were composed of

TABLE 5.
Age-Sex Distribution of the
Project Area Population in 1850
Compared to the Age-Sex Distribution
of the Population of the United States in 1850

Project area					
Age group	Males		Females		Sex ratio
	Number	Percent	Number	Percent	
0-9	878	31.0	819	31.2	107
10-19	775	27.4	751	28.6	103
20-29	416	14.7	420	16.0	99
30-39	289	10.2	264	10.0	109
40-49	226	8.0	203	7.7	111
50-59	157	5.5	103	3.9	152
60-69	58	2.0	51	1.9	114
0-69	2799	98.8	2611	99.3	107
All ages	2832	100.0	2626	100.0	108

United States					
Age group	Males		Females		Sex ratio
	Number	Percent	Number	Percent	
0-9	2844491	28.4	2756095	28.9	103
10-19	2266691	22.6	2264154	23.8	100
20-29	1869092	18.7	1758469	18.5	106
30-39	1288682	12.9	1128257	11.8	114
40-49	840222	8.4	748566	7.9	112
50-59	498660	5.0	459511	4.8	108
60-69	264742	2.7	256480	2.7	103
70-79	111416	1.1	112648	1.2	99
0-79	9983996	99.7	9484180	99.6	105
All ages	10019249	100.0	9523512	100.0	105

TABLE 6.
Ages of Male Heads of Households^a in the Project Area in 1830, 1840^b, and 1850

Age group	1830		1840		1850	
	Number	Percent	Number	Percent	Number	Percent
15-19	4	2.0	3	0.3	1	0.1
20-29	72	35.6	215	21.5	103	12.6
30-39	63	31.2	330	33.0	232	28.4
40-49	30	14.9	263	26.3	231	28.3
50-59	18	8.9	113	11.3	164	20.1
60-69	13	6.4	50	5.0	61	7.4
70-79	2	1.0	24	2.4	22	2.7
80-89	0	0.0	1	0.1	2	0.2

^aNot including residents of towns.

^bIncluding residents outside the project area.

families. Most were nuclear families (i.e., a husband, a wife, and their children) but many were more complex, containing what probably were unmarried adult siblings of the head of the household, and/or older persons, probably parents of the household head. In some cases,

it is apparent that the household was composed of a joint family (i.e., one with more than one marriage), the most frequent of which probably was composed of two generations (e.g., the original nuclear family plus the family of a married son or daughter). Because of the uncertainty of the relationships involved, no statistical study of the kinds of families present was undertaken. Somewhat better data are available for 1850, since names of all household members are listed in the manuscript schedules. A count of households containing people with surnames different than that of the head of the household shows that 30% of all households in the project area contained in-laws or tenants, but it is not possible to distinguish them because relationships are not indicated.

The above discussion does not include slaves, which are discussed in Chapter 5. If slaves are included, mean household size was 6.7 in 1830 with a maximum of 19, 7.5 in 1840 with a maximum of 29, and 8.2 in 1850 with a maximum of 36. The presence of slaves, in-laws, and tenants shows that households tended to be large and complex.

SUMMARY

Settlers of the middle Salt River region were primarily from the upper South, with a majority of them being from the Bluegrass region of Kentucky. They participated in an upper South cultural tradition that featured a specific agricultural complex, a wood technology, and shared social and economic goals. Upper South society in the early nineteenth-century was primarily rural with a subsistence base dominated by corn and pork. Technology was based on the use of wood as

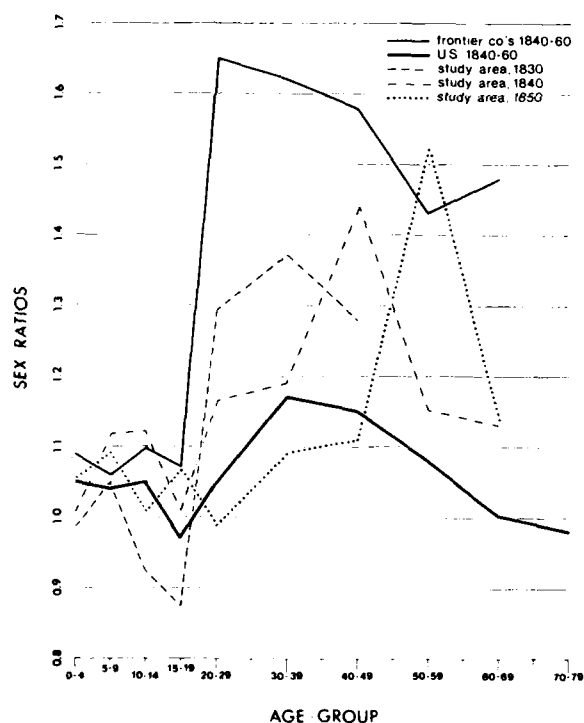


Figure 7. Graph showing (a) sex ratios by age group for the project area in 1830, 1840, and 1850, (b) sex ratios for Ebelen's (1965: Figure 6) average northern agricultural frontier county, and (c) for the United States as a whole for the period 1840-1860.

TABLE 7.
Persons per Household^a in the Project Area in 1830, 1840^b, and 1850

Persons per household	1830		1840		1850	
	Number of households	Percent	Number of households	Percent	Number of households	Percent
1	5	2.4	14	1.3	6	0.7
2	17	8.2	70	6.7	57	6.9
3	24	11.6	93	8.9	64	7.7
4	28	13.5	123	11.7	102	12.3
5	30	14.5	136	13.0	83	10.0
6	22	10.6	133	12.7	108	13.0
7	26	12.6	102	9.7	100	12.0
8	26	12.6	111	10.6	93	11.2
9	10	4.8	92	8.8	79	9.5
10	12	5.8	83	7.9	48	5.8
11	3	1.4	45	4.3	42	5.1
12	2	1.0	22	2.1	16	1.9
13	1	0.5	14	1.3	9	1.1
14	1	0.5	6	0.6	11	1.3
15	0	0.0	4	0.4	3	0.4
16	0	0.0	0	0.0	5	0.6
17	0	0.0	0	0.0	2	0.2
18	0	0.0	1	0.1	0	0.0
Households	207		1049		830	
Population	1192		6766		5502	
Mean number of persons per household		5.6		6.4		6.6

^aNot including slaves and residents of towns.

^bIncluding residents outside the project area.

the primary material, supplemented by iron axe bits, plow shares, and hoe blades. Most farmers, especially on the frontier, were skilled in wood-working, but the forging of iron implements required a specialist—the local blacksmith. The socioeconomic goal of the upper Southerner was to become a member of the landed gentry class, with wealth and social position measured in terms of land and slaves. Members of this class were the political and social leaders. Ownership of slaves allowed production of cash crops such as hemp and tobacco, which supplemented income from the more basic corn and pork production.

The basic socioeconomic unit of upper South society was the family, a corporate group in terms of landholding and labor. Based on a demographic analysis of the project area, it appears that there was a definite correlation between family units and landholding, such that adult offspring of the head of the household remained to contribute their labor to the family until they could afford land or were given land by the family head. In some cases, adult offspring remained at home even after they were married. The presence of in-laws and tenants in households was common and they probably were

considered to be part of the family as long as they contributed labor to the family enterprise. The “compelling ties of family” also have been noted in frontier northern Texas, where young adult males delayed marriage because of “the need for total and united effort [which] heightened the ingroup feeling,” and “the demands for survival in order to conquer the hazards of the primitive conditions” (Williams 1969:63).

Although Eblen (1965) has demonstrated that the percentage of men in their 20s was not as high in northern agricultural frontier counties (23%) as some scholars have predicted, this percentage was even lower in the project area (19.6%), where it was more similar to the national average (18.4%). This lack of single young men on the Missouri frontier probably was due to the presence of slaves, who decreased the demand for agricultural laborers, and to the stronger family tradition characteristic of the upper South. Thus, young men in the upper South may have been more likely to remain within their families, contributing their labor for the benefit of the family as a unit, rather than leaving home to pursue their own self interests or to “seek their fortunes” on the frontier.

LAND ENTRY PATTERNS

This chapter examines temporal and spatial patterning in the sale of public lands (land entries) in the project area. Temporal patterning of entries (amount of land entered per year) was influenced primarily by changing laws relating to disposal of public lands and by changing economic conditions. Economic conditions, which tended to follow a cyclical pattern of inflationary upsurges accompanied by speculative investments in public land, followed by crises or "panics" and periods of depression, were summarized in Chapter 2. Public land laws are summarized in the following section.

Spatial patterning in public land sales was a result of choices made by individual entrants based on their perception of the environment, as conditioned by their cultural background, available technology, previous experience, and knowledge of the new environment. The environment included both physical and social dimensions, or variables. In studying patterning with respect to the physical setting, it is assumed that land with preferred environmental characteristics was entered first, allowing determination of what these preferred characteristics might have been. In studying patterning with respect to the social environment, analysis is limited by a lack of complete data on social variables such as kinship, community affiliation at place of emigration, and religious affiliation. However, some suggestions about the effects of these social variables on the resultant spatial pattern (settlement pattern) are offered. The land entry patterns of residents, nonresidents, and Eastern speculators will be discussed separately, since they may have made land entry decisions based on different perceptions of the situation. The first part of this chapter focuses on patterns of land entry through time and the second on patterns across space with respect to environmental and social variables.

PUBLIC LAND LAWS

Before data on temporal patterns of public land sales are considered, the system by which public land was sold will be discussed. During the last quarter of the eighteenth-century, beginning with the Ordinance of 1785, laws relating to the sale of public lands (land to

which the federal government held title by means of treaty or purchase from Indians and other nations) were formed to deal with land in Ohio (Peters 1845a:27) and the Northwest Territories (Peters 1845a:464, 728; Peters 1845b:73). A law passed on May 18, 1796, (Peters 1845a:464-469) provided for appointment of a surveyor general to subdivide land in the Northwest Territories into square townships six miles on a side and divided into 36 one-mile-square sections (640 acres). The governor of the territory was to be in charge of the sales, supervised by the secretary of the treasury. The federal government was to issue a patent (deed) to land sold, which was to be signed by the president.

A law passed on May 10, 1800, established the system for the sale of all public land in the United States (Peters 1845b:73-78). This law, which was employed until 1820, provided for the sale of public land from an office within the district where the land was located. Each office was directed by a register and a receiver who were responsible to the surveyor general and to the secretary of the treasury. Land was to be sold at public sale (auction) for three weeks and then, if still unsold, was to be offered at private sale for the minimum price of \$2/acre plus a survey fee of \$6/section. A credit system was established that required a deposit of one-twentieth of the total price at the time of purchase, plus the survey fee. One-fourth of the price was to be paid within 40 days and the remaining three-fourths (plus 6% interest) were to be paid within two, three, and four years from the date of sale. In addition, there was a discount of 8% per year for early payment. The minimum purchase under this law was a half-section. Plat books showing the sections for sale in relation to rivers and streams and timber-prairie boundaries were available for inspection at the land office for a fee of 2¢.

A law passed on February 11, 1805, further specified methods of survey and directed that all sections should be divided into quarter-sections (Peters 1845b:313). In 1812 the General Land Office (GLO) was created in the Department of the Treasury, and assumed responsibility for all survey and sale of public land in the United States (Peters 1845b:716-718). The chief officer was given the title of commissioner and was responsible for all land accounts and receipts. He also co-signed (along with the president) all patents.

In 1803, a vast area of public land was added to the

United States as a result of the Louisiana Purchase. A law passed on March 3, 1811 (Peters 1845b:662-666) provided for the survey of land in the territories of Orleans and Louisiana. Land offices were established at New Orleans and Opelousas, Louisiana, and at a site to be determined by the president for the district north of the Red River. This office later was opened at St. Louis. Although an "avalanche of settlers" arrived in the Boon's Lick area of Missouri territory in 1816 and 1817, land sales did not begin until August, 1818, due to the time consuming process of land survey and the need to settle preemption and private claims (Rohrbough 1968:133). Survey of the Fifth Principal Meridian in Missouri was not begun until October 27, 1815, and was completed on May 29, 1816 (Thomas 1909:228). Survey of Missouri land into townships and sections did not begin until a surveyor-general for Illinois and Missouri territories was authorized by Congress on April 29, 1816 (Peters 1845c:325-326), and until the Black Hawk Treaty, which formally ended the War of 1812 in Missouri, was signed on May 13, 1816 (Thomas 1909:230). William C. Rector was appointed surveyor-general of Illinois and Missouri on May 10, 1816, and began letting survey contracts during the summer of 1816. Survey in north-east Missouri was completed during the summer of 1818 (Thomas 1909:230).

Additional land offices and districts were created in Missouri by an act of Congress on February 17, 1818 (Peters 1845c:406-407). In addition to the one at St. Louis, offices were established at Jackson in Cape Girardeau County and at Franklin in Howard County, as well as in what was to become Arkansas. The project area fell within the district of St. Louis, which included all the area north of T34N between the Mississippi River and the west line of R10W. This act also authorized the president to direct that land in these districts be sold whenever the surveys were completed.

On April 30, 1818, the following presidential proclamation was issued:

I, James Monroe, President of the United States, do hereby declare and make known, that public sales for the disposal (agreeably to law) of certain lands in the territory of Missouri, shall be held as follows, viz.: At St. Louis, in the said territory, on the first Monday in August, October, December, February, and April next, and three weeks after each of the said days, for the sale of lands in the land district of St. Louis. Thirty townships shall be offered at each sale, commencing with the most eastern ranges west of the fifth principal meridian line, and proceeding westerly [*Missouri Gazette and Public Advertiser*, January 1, 1819].

Public sales of land in the project area began December 7, 1818, when land in T54N, R6-8W was offered. Land in R9W and R10W of T54N was first offered for sale on February 1, 1819, and land in T55-57N and R6-9W was first offered for sale on April 5, 1819 (*Missouri Gazette and Public Advertiser*, January 1, 1819). At the February sales

only about 10% of the land offered for sale (assuming 30 townships were offered) was sold at public auction, at an average price of \$2.52/acre (Rohrbough 1968:134).

As discussed in Chapter 2, the Panic of 1819 was largely a result of the calling in of all outstanding debts by the Second Bank of the United States after a period of easy credit and inflation. Money to make payments for public land had been issued by hundreds of new small banks with little specie to back it up, so that this paper currency was suspect and rapidly became devalued. In 1820, the unpayable debt on public land sales, caused by the Panic of 1819, was \$23 million (Rohrbough 1968:138). Credit relief acts were passed in the 1820s, that extended the time for payment and allowed application of money already paid to be used to buy other land, usually smaller tracts (Peters 1845c:612, 66, 781; 1846:286).

The massive default on land payments after the Panic of 1819 resulted in passage of a new land sales act on April 24, 1820, which replaced the credit sales policy with a cash-only policy as of July 1, 1820 (Peters 1845c:66-67). This act also reduced the minimum purchase price to \$1.25/acre and the minimum entry to a half-quarter section (80 acres), the long axis of which ran north-south. This greatly reduced the amount of cash an entrant had to have in order to enter land.

In 1824 the St. Louis land district was divided and the northern part became the Salt River district, with its land office at Palmyra (Figure 1). The boundaries of the new district, according to an act of Congress passed on May 26, 1824, were as follows: from the Mississippi River west with the north line of T48N, then north with the east line of R11W to the north line of T52N, then west with this line to the east line of R14W, then north with this line to the state line and east with the state line to the Mississippi River (Peters 1846:50). The entire project area was included within the Salt River land district.

The 1820 land sales act was modified on April 5, 1832, to further reduce the minimum entry to a quarter-quarter section (40 acres) if an affidavit was filed that stated the land was to be used for cultivation by the purchaser (Peters 1846:503). This act went into effect on May 1, 1832. On May 8, 1846, the proviso of the 1832 act requiring the affidavit was repealed (Minot 1854:9).

Most land in the project area was sold at private sale under the provisions of the acts of 1820 and 1832. However, during the latter part of the period (1847-1859) during which public land in the project area was sold (1818-1859), sales were affected by the military bounty acts and the Graduation Act. The military bounty acts gave public land to military personnel who had served during time of war. The first military bounty act, passed on February 11, 1847, provided a warrant good for 160 acres redeemable at any land office, to each noncommissioned officer, musician, and private who served 12

months or more in the war with Mexico. (Those who served less than 12 months received warrants for 40 acres [Minot 1854:123-12]). On September 28, 1850, the right to bounty land was extended to officers who served in the Mexican War and to all military personnel who had served in the War of 1812 or in any Indian war (Minot 1854:520-21). Most recipients of military warrants sold them, frequently for less than \$1.25/acre, to speculators, agents, and loan sharks who resold them to settlers, usually on credit with high interest rates (Gates 1942:325).

The Graduation Act, passed by Congress on August 4, 1854, reduced the price of poor land that had remained unsold for 10 or more years (Minot 1866:574). Land that remained unsold 10 years after it originally was offered for sale was to be sold for \$1/acre and the price was reduced by 25¢ every five years thereafter until it reached 25¢/acre after 25 years on the market. If it was on the market for 30 years, the price fell to 12.5¢/acre, after which no more reductions were made. In order to be eligible for reduced prices, the entrant had to sign an affidavit affirming that the land was to be used by the entrant for settlement or cultivation and that the purchaser already had not entered more than 320 acres of graduated land.

TEMPORAL PATTERNING IN LAND ENTRIES

Temporal patterning in the sale of federal public lands in the project area is summarized in Table 8, which shows the number of acres sold per year and the percent of the project area sold per year for all entrants, residents, nonresidents, and Eastern speculators (defined in Chapter 1).¹ Percent of area sold per year also is presented graphically in Figure 7. The numbers of persons making entries each year are listed in Table 9 and shown graphically in Figure 8.

From Figure 7 it is apparent that entries by residents accounted for most public land sales and that economic cycles had a profound effect on the timing of land entries. Residents comprised 75.2% of all entrants and accounted for 65.9% of all land sales in terms of area entered. First entries were made during the inflationary and speculative period preceding the Panic of 1819

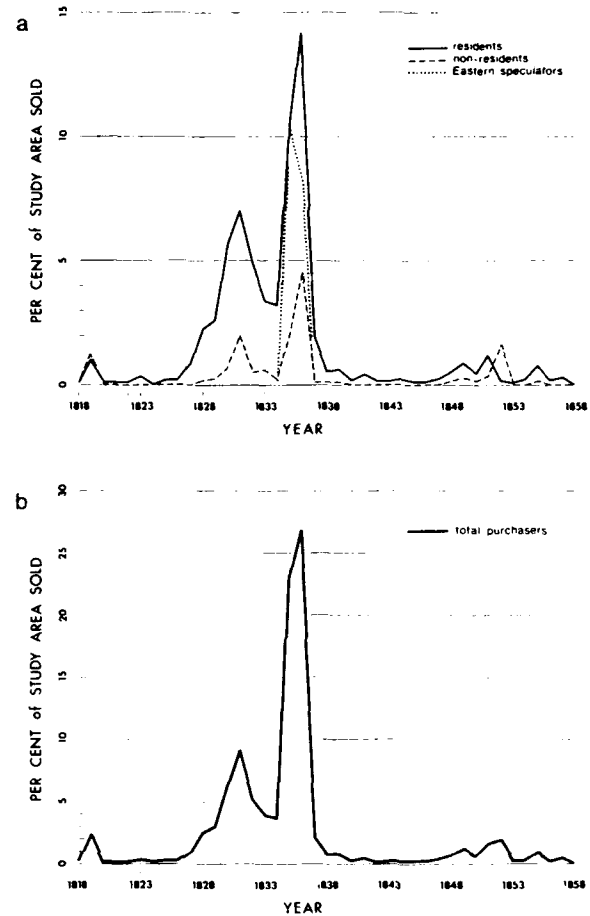


Figure 8. Graph showing the percent of the project area sold per year for (a) entrants, residents (—), nonresidents (---), and Eastern speculators (.....) and (b) total purchasers.

under the credit sales policy. The period of depression in the first half of the 1820s, combined with the cash-only policy, severely limited the amount of land sold in the area between 1820 and 1826. When the economy began to expand in the late 1820s, land sales increased dramatically, culminating in 1836 when land speculation peaked nationally. In the ten year period of 1827-1836, 84% of the land in the project area was sold, with the period 1835-1836 accounting for 50% of all land sold. By the end of 1838, 90% of the public domain in the project area had passed into private ownership. The probability that the remaining 10% was undesirable land, combined with effects of the depression following the crash of 1837, served to delay sale of remaining land.

The decrease in land sales during the years 1832-1834 may have been due to unknown changes in local economic conditions or to passage of the 40-acre law on May 1,

¹School (Section 16) land and swamp land ceded to the state by the federal government is not included.

TABLE 8.
Number of Acres and Percent of Federal Public Land in the Project Area Entered per Year
by Residents, Nonresidents, and Eastern Speculators^a

Year	Residents		Non-residents		Speculators		Total	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
1818	240	0.1	320	0.1	0	0	560	0.2
1819	3520	1.1	4480	1.3	0	0	8000	2.4
1820	320	0.1	0	0.0	0	0	320	0.1
1821	320	0.1	0	0.0	0	0	320	0.1
1822	320	0.1	0	0.0	0	0	320	0.1
1823	1040	0.3	0	0.0	0	0	1040	0.3
1824	80	0.0	0	0.0	0	0	80	0.0
1825	640	0.2	0	0.0	0	0	640	0.2
1826	640	0.2	160	0.0	0	0	800	0.2
1827	2360	0.7	0	0.0	0	0	2360	0.7
1828	7520	2.3	480	0.1	0	0	8000	2.4
1829	8880	2.7	640	0.2	0	0	9520	2.9
1830	18720	5.7	2120	0.6	0	0	20840	6.3
1831	23760	7.2	6560	2.0	0	0	30320	9.2
1832	15880	4.8	1560	0.5	0	0	17440	5.3
1833	11200	3.4	1840	0.5	0	0	13040	3.9
1834	10960	3.3	1080	0.3	0	0	12040	3.6
1835	35400	10.6	6880	2.1	34200	10.3	76480	23.0
1836	47720	14.3	15280	4.6	26520	8.0	89520	26.9
1837	6160	1.9	480	0.1	80	0.0	6720	2.0
1838	1560	0.5	480	0.1	80	0.0	2120	0.6
1839	2160	0.6	240	0.1	0	0	2400	0.7
1840	560	0.2	40	0.0	0	0	600	0.2
1841	1280	0.4	40	0.0	0	0	1320	0.4
1842	280	0.1	80	0.0	0	0	360	0.1
1843	280	0.1	0	0.0	0	0	280	0.1
1844	520	0.2	80	0.0	80	0.0	680	0.2
1845	480	0.1	80	0.0	0	0	560	0.2
1846	360	0.1	0	0.0	0	0	360	0.1
1847	840	0.3	40	0.0	0	0	880	0.3
1848	1640	0.5	360	0.1	0	0	2000	0.6
1849	2640	0.8	1160	0.3	0	0	3800	1.1
1850	1520	0.5	520	0.2	0	0	2040	0.7
1851	4280	1.3	1200	0.4	0	0	5480	1.7
1852	680	0.2	5400	1.6	0	0	6080	1.8
1853	320	0.1	160	0.0	0	0	480	0.1
1854	600	0.2	0	0.0	0	0	600	0.2
1855	2160	0.6	480	0.1	0	0	2640	0.7
1856	600	0.2	120	0.0	0	0	720	0.2
1857	1040	0.3	160	0.0	0	0	1200	0.4
1858	40	0.0	120	0.0	0	0	160	0.0
1859	0	0.0	160	0.0	0	0	160	0.0
Total	219520	66.4	52800	15.3	60960	18.3	333280	100.0

^aDoes not include 1030 acres with unknown entry dates and 13,820 acres of school and swamp land ceded to the state.

1832, which reduced the minimum entry from 80 acres to 40 acres. During the period July 1, 1830, to April 30, 1832, 50% of the individual entries by residents were 80-acre parcels, while in the period May 1, 1832, to July 30, 1835, 30% were 80-acre parcels and 41% were

40-acre parcels. However, the number of entrants also decreased, and perhaps the peak in sales in 1831, rather than the drop in 1832, requires explanation.

The slight peaks in land sales in 1849 and 1851 probably are the result of the military bounty land acts

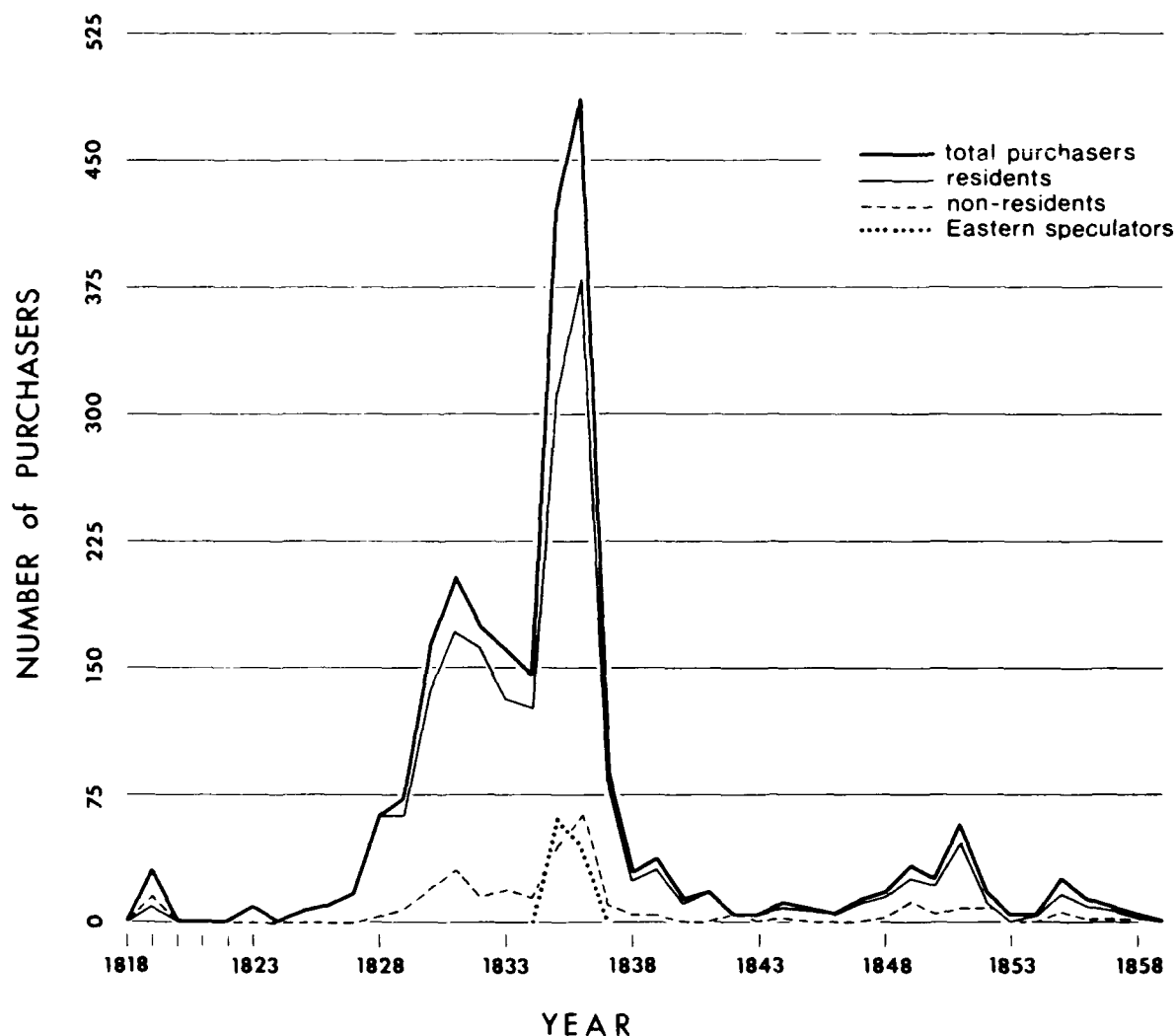


Figure 9. Graph showing the number of persons making entries each year.

of 1847 and 1850. Military land warrants usually could be obtained for less than \$1.25/acre (Gates 1942:32), which served to lower the price of undesirable land in the project area. Undesirable land was reduced further in price by the Graduation Act of 1854, and since all land in the project area had been offered for sale for more than 30 years, the price of all remaining public land was reduced to 12.5¢/acre. The effect of this price reduction can be seen in a slight rise in land sales in 1855, followed by the sale, in 1859, of the last remaining piece of federal public land.

Assuming that the time of the first land entry by residents represents their arrival in the area, it is apparent from Table 10 that the major period of settlement was from 1828 through 1836. The size of first entries by residents decreased through time from an average of 164

acres in the period 1818-1826 to 104 acres in the period 1827-1834. The speculative years 1835-1836 showed a slight increase in the size of first entries with an average of 108 acres, but in the succeeding period 1837-1847 the average size of first entries dropped to 60 acres. An increase during the period 1848-1858 to 108 acres probably was due to effects of the military bounty acts and the Graduation Act. Table 10 also shows that the end of the credit policy in 1820 had a noticeable effect on the size of first entries by residents, with the average size decreasing from 296 acres in 1819 to 108 acres in 1821. The effect of the 1832 law that reduced the minimum entry from 80 to 40 acres is less noticeable. The average size of a resident's first entry in 1831 was 120 acres, in 1832 it was 100 acres, and in 1833 it was 88 acres. It is interesting that the percent of land entered by residents

TABLE 9.
Number of Individuals Making Entries Each Year
in the Project Area

Year	Residents (n = 1973)	Nonresidents (n = 141)	Eastern speculators (n = 110)	All entrants (n = 2224)
1818	2	2	0	4
1819	11	18	0	29
1820	2	0	0	2
1821	3	0	0	3
1822	3	0	0	3
1823	8	0	0	8
1824	1	0	0	1
1825	5	0	0	5
1826	6	1	0	7
1827	16	0	0	16
1828	62	4	0	66
1829	64	7	0	71
1830	139	20	0	159
1831	172	30	0	202
1832	159	15	0	174
1833	132	18	0	150
1834	130	16	0	146
1835	314	46	62	422
1836	379	64	45	488
1837	87	9	1	97
1838	24	5	1	30
1839	33	4	0	37
1840	11	1	0	12
1841	17	1	0	18
1842	3	2	0	5
1843	5	0	0	5
1844	7	2	1	10
1845	6	1	0	7
1846	5	0	0	5
1847	10	1	0	11
1848	14	3	0	17
1849	25	10	0	35
1850	19	4	0	23
1851	46	9	0	55
1852	10	10	0	20
1853	3	1	0	4
1854	5	0	0	5
1855	18	6	0	24
1856	11	3	0	13
1857	5	2	0	7
1858	1	3	0	4
1859	0	1	0	1

that was part of a first entry dropped below 50% for the first time in 1835. This indicates that the majority of land entered by residents during the speculative period 1835-1836 represented secondary entries by already established residents, rather than the arrival of new settlers.

The project area differs from the Boon's Lick area and land along the Mississippi River in that it had few if any residents prior to the first land sales in 1818. Thus, the time of first land entry probably is a good indicator of the time of arrival in the area. The only resident in 1818 may have been Jesse Burbridge, the only entrant to take advantage of preemption rights. A law passed on April 29, 1816, (Peters 1845c:330) extended preemption rights to settlers in Mississippi, meaning that those cultivating and inhabiting land before it first was offered for sale could buy the quarter-section (160 acres) they occupied at a minimum price of \$2/acre, thus avoiding bidding against others at public auction. Since preemption claims and the initial deposit had to be made before the first day of public sale, entry dates should indicate preemption sales. Burbridge entered the northeast quarter of Section 29 in T54N, R7W on November 26, 1818, 12 days before the first public sale of land in the township. Although Burbridge may have been the first resident to enter land in the project area, he did not remain long, since he does not appear in any of the poll books during the 1820s nor in the 1830 census. His land passed through an unrecorded transaction to James Underwood, who first appears in the 1840 census. Burbridge probably was the only one to exercise preemption rights, since all other entry dates for land in the project area fall on or after the first day of public sale (which varied depending on township location; see above).

Demand for land in the project area was low when it was first offered for sale in 1818-1819, as demonstrated by the fact that only 1360 acres of the 333,360 acres available in the project area were sold at auction (purchased by three men at the April, 1819, auction). This probably was due to the remoteness of the region and its distance from established routes along the Mississippi. Portions of the remainder of the land in the project area were sold at the minimum price after the initial three-week auction period was over.

It is apparent from Figure 7 that sales to nonresidents followed a temporal pattern similar to that of residents, although at a much reduced scale. Nonresidents comprised 18.1% of all entrants and entered 1.9% of the land in the project area. The only years when sales to nonresidents exceeded those to residents were 1819 and 1852. This is to be expected for 1819 since, as noted above, there were few persons in the area; most sales were made to residents of the St. Louis area where the land office was located. However, as Table 8 shows, almost half (44%) the land sold in 1819 was entered by people who later became residents of the project area.

The other year when sales to nonresidents exceeded sales to residents was in 1852. This is due to the large amount (4480 acres) of land granted to the Hannibal and St. Joseph Railroad to help finance its construction. It is probable that the railroad did not realize much financial

TABLE 10.
Number of Residents Making First Entries, Number of Acres in First Entries,
Total Number of Acres Entered, Percent of Area Entered That Was Part of First Entry,
and Mean Size in Acres of First Entries by Year

Year	Number first entrants	Acres first entries	Acres all entries	Percent first entry	Mean size
1818	2	240	240	100.0	120
1819	10	2960	3520	84.1	296
1820	2	320	320	100.0	160
1821	3	320	320	100.0	108
1822	3	320	320	100.0	108
1823	7	800	1040	76.9	116
1824	1	80	80	100.0	80
1825	4	560	640	87.5	140
1826	6	640	640	100.0	107
1827	15	2280	2360	96.6	152
1828	58	6560	7520	87.2	113
1829	42	5560	8880	62.6	132
1830	107	12360	18720	66.0	116
1831	110	13040	23760	54.9	120
1832	96	9440	15880	59.4	100
1833	76	6720	11200	60.0	88
1834	84	6480	10960	59.1	76
1835	175	15480	35400	43.7	88
1836	181	23080	47720	48.4	128
1837	40	2600	6160	42.2	64
1838	14	880	1560	56.4	64
1839	18	1000	2160	46.3	56
1840	7	280	560	50.0	40
1841	7	400	1280	31.3	56
1842	2	120	280	42.9	60
1843	3	160	280	57.1	52
1844	4	240	520	46.2	60
1845	3	240	480	50.0	80
1846	1	40	360	11.1	40
1847	3	120	840	14.3	40
1848	8	1160	1640	70.7	144
1849	13	1200	2640	45.5	92
1850	8	760	1520	50.0	96
1851	21	1680	4280	39.3	80
1852	5	360	680	52.9	72
1853	3	320	320	100.0	108
1854	3	400	600	66.7	132
1855	11	1560	2160	72.2	140
1856	3	200	600	33.3	68
1857	3	880	1040	84.6	292
1858	1	40	40	100.0	40
1859	0	0	0	0.0	0

benefit, since the land it received had remained unsold since 1819. The value of the railroad land was reduced further by the Graduation Act of 1854.

Entries by Eastern speculators (not included in the nonresident group discussed above) were confined almost entirely to the years 1835 and 1836. A total of 104 speculators from the states of Pennsylvania, New York, New Jersey, and Connecticut (see Table 11) entered

60,960 acres in the project area. Thus, 6.7% of all entrants were Eastern speculators, who entered 18.3% of the land in the project area. The majority of entries by Eastern speculators were made on only eight days in the year from August 31, 1835, to August 31, 1836. This may be due to the use of the same land agent in Palmyra who made entries for all his clients on the same days.

The above discussion has summarized the total amount

TABLE 11.
Counties of Residence of Eastern Speculators^a

State	County/town	Number of speculators (<i>n</i> = 104) ^b
New York	New York	56
New York	Saratoga	1
Pennsylvania	Bucks	1
Pennsylvania	Canonsburg	1
Pennsylvania	Philadelphia	23
Pennsylvania	Pittsburgh	7
New Jersey	Essex	1
New Jersey	Hamburg	3
New Jersey	Morris	2
New Jersey	Rahway	1
Connecticut	Hartford	4
Massachusetts	Pittsfield	1

^aBased on patent information.

^bIncludes three of unknown origin.

of land sold by year to various groups (residents, nonresidents, and Eastern speculators). Table 12 summarizes data on the average amount of land entered by individual residents during 10 time periods that were chosen to correlate with changes in land laws, economic conditions, and with census years. The mean amount of land entered by a resident during all time periods combined was 189 acres, slightly more than a quarter-section. The means for the 10 time periods show the effect of land laws and economic conditions on individual purchasers. The combination of the cash-only policy and the depression of the early 1820s had the most marked effect on the amount of land entered by an individual, with the mean dropping from 300 to 124 acres per person after 1820 (it should be noted that the

TABLE 12.
**Mean Amount of Land Entered by Residents
During Ten Time Periods**

Period	Number of Entrants	Mean Number of Acres
1- 1-18 to 6-30-20	13	300
7- 1-20 to 8- 7-26	21	124
8- 8-26 to 6-30-30	163	152
7- 1-30 to 4-30-32	278	152
5- 1-32 to 7-30-35	408	100
7-31-35 to 7-31-36	462	134
8- 1-36 to 6-30-40	261	84
7- 1-40 to 2-10-47	46	74
2-11-47 to 8- 3-54	122	104
8- 4-54 to 12-31-59	33	116

high mean for the first period is in part due to the large entry of one man who bought 1440 acres; without this individual the mean drops to 208 acres). The increase in the mean after 1826 can be attributed to improving economic conditions, while the drop in the mean after 1832 probably represents the influence of the 40-acre law. This was followed by an increase in the mean during the speculative year of 1835-1836 and a marked decline during the succeeding depression. Increases after 1847 and 1854 reflect effects of the military bounty acts and the Graduation Act.

The statistics on public land entries discussed above represent only land sold directly by the federal government and do not include school lands, swamp lands, and transactions between individuals. Sections 16 in each congressional township were reserved for support of schools at the local level, and titles to these lands were given to the state, which in turn delegated responsibility for their sale to the counties. The county usually appointed a commissioner of township school lands who conducted an auction of land in each Section 16 on dates set by the county court. Thus, land in Section 16 was not available for purchase until several years after formation of a county government. In Monroe County, sales of township school lands during the 1830s were made as follows (MCCR A:5, 63, 298, 312, 354): T54N, R8W June 1831; T54N, R9W August 1833; T55N, R10W February 1836; T54N, R8W May 1836; T55N, R8W May 1836; T56N, R10W August 1836. It is probable that Section 16 land in T54N, R10W was sold in 1831, and that land in Section 16, T53N, R8W was sold in 1836, judging by state patent dates (the dates of these sales were not recorded). The concentration of sale dates during 1836 indicates that county officials were well aware of economic conditions and took advantage of the boom in land speculation that occurred that year. The appearance of Section 16 land in T54N, R8W, in sales of both 1831 and 1836, indicates that the entire section was not sold in 1831 and that the remaining land was again offered in 1836. This is confirmed by patent dates. The 1836 sales were successful, since all school land in T54N, R8W, T55N, R8W, and T55N, R10W was reported sold by August, 1836 (MCCR A:356). No sale dates are available for Ralls County, but judging by patent dates, it is probable that sections 16 in T55N, R6W, and in T54N, R7W were sold during the 1830s, probably during 1836. School lands in the other two Ralls County townships in the project area, together with lands in the northern part of Monroe County and in Shelby County, were not sold until at least the 1840s. Most purchasers of school land appear to have been established residents of the area with farmsteads adjacent to sections 16. A few were residents of towns in the project area or were wealthier residents with land in other parts of the area who probably

bought school land as a speculative investment.

Tracts determined to be swamp land by state swamp land commissioners also were ceded to the state by the federal government. Most of this land was sold after 1850 at auction by the state for a few cents an acre. All 6240 acres of declared swamp land found in the project area were in Monroe County. Dates of sale are unknown.

SPATIAL PATTERNING IN LAND ENTRIES: THE PHYSICAL ENVIRONMENT

The question of how settlers chose available tracts of land is a complex one. Obviously, characteristics of both the physical and social environment were important. Here, the concern is with what physical characteristics of the land were perceived as desirable by prospective settlers. Data on this subject come from narrative accounts, map analysis, and statistical analysis.

Narrative Accounts

When the first settlers arrived in Kentucky, they found "a kind of open forest; in which the lawns were tangled with cane, and other luxuriant vegetation, and grass" (Flint 1970, II:208). Francois Michaux, a French botanist who traveled through the Bluegrass region of Kentucky in 1802, noted that there was little "herbage" between trees and that trees were far enough apart that "a stag may be seen a hundred or a hundred and fifty fathoms off" (Michaux 1904:231). Areas between trees originally were covered with an evergreen cane or reed up to eight feet in height (Michaux 1904:231). The park-like nature of the Bluegrass region was described by Timothy Flint (1970, II:174-17): Trees were "promiscuously arranged for the effect of a pleasure ground," seemingly "having been transplanted to the places, which they occupy."

Since emigrants from the Bluegrass region of Kentucky likely sought land with a similar environment, the above description of the region is necessary in order to understand decisions about land purchases made by emigrants from the Bluegrass who came to northeast Missouri. As Brookfield (1969:53) has noted, "decision-makers operating in an environment base their decisions on the environment as they perceive it, not as it is." Environmental perception is based on cultural background, on available technology, and on previous experience with similar environments.

The wood-oriented technology (see Chapter 3) and forest environment of settlers from the upper South

caused them to judge the quality of soils by the kinds and sizes of trees characteristic of an area. Referring to Kentucky and Tennessee in 1802, Michaux (1904:228) reported that:

In these two states they appreciate the fertility of the land by the different species of trees that grow there; thus when they announce the sale of an estate, they take care to specify the particular species of trees peculiar to its various parts, which is a sufficient index for the purchaser.

Flint (1970, II:174) noted that "trees which indicate the richest soil, are everywhere abundant" in the Bluegrass region. Fortescue Cuming (1904:16), traveling down the Ohio River in 1807, commented on tree size: "The appearance of the timber since we passed Little Sandy, indicated the soil to be not so rich as above that river, it being of a much smaller growth."

Given this forest-biased perception of the environment, avoidance of prairies could be predicted. The case of the Kentucky Barrens, a treeless grass-covered area in south-central Kentucky, confirms this prediction. Michaux (1904:220) encountered only 18 houses in 65 miles of road while crossing the Barrens in 1802. The Kentucky legislature, endeavoring to overcome the forest bias, offered 400 acres free to every man who would become an actual settler in the Barrens (Flint 1970, II:17). Flint (1970, II:17) reported that the grassy Barrens afforded "fine range for cattle" but that "so much of the land was incapable of clearing and cultivation from a variety of causes, that the range will probably remain unimpaired for a long time."

Jordan (1964:206) sought to test the hypothesis that southerners from Kentucky and Virginia in the Old Northwest before 1830 avoided prairies because of (a) the absence of timber for construction, fuel, and fencing; (b) the lack of surface water sources; and (c) the difficulty of breaking sod. Both Jordan (1964:208) and McManis (1964:38) believe that the major objection to prairies was lack of timber rather than a belief in the infertility of prairie soils. Jordan (1964:216) concluded, on the basis of narrative sources describing settlement, that mixed vegetation areas (where timber and prairie interdigitated) were preferred by people of varied origins (not just southerners). There was often an extensive transition zone between forest and prairie where trees were widely spaced and sod was not as thick as in the center of large prairies. Thus, cultivation could be carried out without laborious tree clearing or expensive sod breaking. Most accounts studied by Jordan (1964:212) state that houses were located in the woods on the edge of the prairie and that crops were grown in the prairie.

McManis (1964:70), who used land purchase records, as well as narrative sources, studied settlement locations in Illinois and concluded that timber sold earlier than prairie and that prairie near timber sold earlier than prairie center. Only prairie margins had been settled by

the 1830s and prairies were used as an adjunct to timber settlement. Houses were located in the timber and the prairie edge was cultivated and used for pasture (McManis 1964:86). McManis attributes the avoidance of prairies to an unwillingness to give up the traditional wood-oriented technology for substitutes such as brick or sod houses, hedges, coal fuel, and wells. Prairies may have been more favorably perceived by northerners than by southerners, since the first prairie edge settlements in Illinois consisted mostly of "Yankees and foreigners" and early records show that most sod breaking was carried out by northerners (McManis 1964:92, 94).

Timber clearing was hard work but could be accomplished by means of family labor. Sod breaking usually required cash to hire a sod-breaking specialist who had the necessary equipment and animals. Breaking teams in the 1830s consisted of three to six yoke of oxen hitched to a pair of cart wheels and a plow with a 14 foot beam and an iron share weighing 60 to 125 pounds. These teams could plow from one to two acres per day and the cost was \$1.50-\$4/acre, more than the purchase price of the land (\$1.25/acre from the federal government) (McManis 1964:52; Pooley 1908:544-545). Usually only northerners had the necessary capital (McManis 1964:94). In Missouri the availability of slave labor may have been considered in decisions to clear timber rather than to break prairie sod.

Earlier studies tend to confirm Jordan's (1964) opinion about the desirability of prairie edges. Pooley's study of the settlement of southern Illinois showed that large prairies were avoided by pioneers from Kentucky and Tennessee but that prairie edges were favored, the usual strategy being to build a cabin at the edge of the timber and fence part of the prairie for cultivation (Pooley 1908:324). Thus, small prairies were "subjugated" and "every man could, figuratively speaking, keep his back to the timber and his attention on the prairie" (Pooley 1908:324). Bidwell and Falconer (1925:267-269) state that oak openings and small prairies in Ohio, Indiana, Illinois, and Missouri were settled in the 1830s but that open prairies were avoided, since the ideal was to have timber for fuel, a water source, and the prairie edge for tillage and pasture.

Descriptions of environmental preferences for early settlement in Missouri are few. Timothy Flint, describing Missouri in 1828, mentioned "extensive tracts of that fine kind of timbered upland alluvion, which constitutes the finest central portions of Kentucky" (1970, II:65) around Belleville and the Boon's Lick settlement. Smaller tracts of this kind of land could be found throughout the state:

These lands are timbered with the same trees, which the alluvions bear. Like those, they are surmounted with grape vines, and are free from underbrush. The graceful pawpaw, the persimmon, and the wild cherry tree, all denoting rich

soils, abound in these regions; and they are nearly as fertile as the bottoms of the Missouri, or the Mississippi [Flint 1970, II:6].

However, Flint was equally enthusiastic about the prairies in Missouri which

has lands already fit for the plough, sufficient, it is believed, to produce wheat enough for whole nations. Prairies of hundreds of thousands of acres of first rate wheat lands covered with grass, and perfectly free from shrubs and bushes, invite the plough [Flint 1970, II:68]

Lewis Beck, writing in 1823, apparently favored timbered bottomland:

On the banks of the Mississippi and Salt River, are several extensive and fertile bottoms, which are frequently covered with a heavy growth of timber, and afford every inducement to the agriculturalist [Beck 1823:243-244].

Referring specifically to Salt River, Beck (1823:315) states that: "The lands on its borders are generally fertile; occasionally, however, the prairies are very extensive, particularly near its headwaters." However, a negative factor was that "the banks of Salt River have always been considered unhealthy" (Beck 1823:315). Beck and Flint, writing in the 1820s, discussed timber and prairie zones but did not mention prairie edges. However, James Flint (1904:130), quoting hearsay about Missouri land sales at St. Louis in 1819, states that: "The most advantageous purchases are considered to be those on the edges of prairies, with a part of the open land, and a part of the woods."

Prairie edge locations were discussed in the 1830s with reference to the project area in a gazetteer of Missouri (Wetmore 1837) and in a letter written by a settler. *The Gazetteer of the State of Missouri*, published in 1837, states that the timber to prairie ratio in Monroe County was two to one and that "this is more than a sufficient quantity of timber for the cultivation of all the prairie" (Wetmore 1837:120). A letter written in 1831 by Richard D. Powers, an emigrant of Greenup County, Kentucky, who bought land west of Florida in the fall of 1830, provides rare information about land purchasing strategies. Powers bought an 80-acre tract with a cabin, a loom house, a stable, cribs, and 18 acres already cleared and fenced, for \$300. He also bought an adjacent 80 acres for \$250 and entered another 160 acres for \$200. For a cash outlay of \$750, he had a 320 acre tract with improvements already made. Of the 320 acres, 60-80 acres were prairie and the rest woodland with oak, black walnut, honey locust, elm, cherry, sugar tree, blue ash, and hackberry in large quantities. Powers considered this to be high quality land, with very black, loose, strong soil, of considerable depth. It is remarkable that all the trees listed by Powers, with the exception of oak and sugar trees, appear in Michaux's list of trees denoting first class land in Kentucky in 1802 (Michaux 1904:229).

The narrative accounts summarized above have discussed settlement in timber and prairie zones in general terms. However, the environment of the project area should not be treated so simplistically. While the prairie area tended to be a fairly undifferentiated level upland surface, significant variation occurred within the timber zone in terms of slope, topographic features, and tree density. At the edges of the level upland prairie zone there was a narrow band of sloping prairie (5-14% slope), which at a slightly lower elevation became mixed timber-prairie slopes (also 5-14%). Density of trees greater than seven inches in diameter averaged 25-50/ha in this transition zone (Warren 1976, 1982). This means trees were about 14-20 m apart. Below this zone a denser forest began, with tree densities of 50-75/ha (about 11-14 m apart). Topographic features in this forest zone include moderate slopes (5-14%), steep slopes (14-30%), ridgetops, and at lower elevations, high terraces, low terraces, and bottomlands along rivers. Terraces and bottomlands generally have slopes of less than 5%. There also were small areas of prairie terraces and prairie bottomlands that comprised less than 3% of the project area. Upland and lowland prairie soils comprised about 39% of the project area in Ralls and Monroe counties.

Knowledge of the environment of the Bluegrass region of Kentucky and the environment of the project area, combined with knowledge of choices made by settlers from the upper South in similar environments in other parts of the Midwest, allows hypotheses to be proposed for testing in the project area. It is hypothesized that settlers of the project area selected a timber location for their house, and that a significant number of these houses were located in the timber-prairie transition zone, not only for the advantages of cultivation and pasture outlined above, but also because tree density in this zone probably was similar to that of the Kentucky Bluegrass region. The few known locations of houses dating to the initial period of settlement in the project area allow a more specific hypothesis to be formulated: that houses should be located on timbered ridge tops and timbered moderate (5-14% percent) slopes. Of 24 known early house sites in Monroe County, 14 (58%) were located in this environmental zone. If it is assumed that subsequent entries by residents were made for the purpose of increasing land for cultivation and pasture, it can be hypothesized that later entries by an individual will expand downward to include level terraces and upward to include prairie-edge and prairie tracts.

Although observations by travelers and authors of gazeteers are useful in formulating hypotheses, they do not provide information about actual settlement location decisions made by settlers in the project area. The Powers letter is an exception but it is unique and may not be representative of the hundreds of decisions made

by other settlers. The fact that Powers had \$750 in cash to spend on land indicates that he was part of a wealthy minority. Indeed, in 1840 Powers ranked twenty-fifth in wealth out of 647 land entrants (see Chapter 5 for method of computation). In order to study the land entry decisions of all settlers in the project area in terms of the hypotheses discussed above, a statistical approach that quantifies data on entries made by individuals in terms of entry date and environmental variables can be employed. However, before statistical analysis of spatial data is carried out, it is useful to have a visual display of such data in map form.

Map Analysis

Two maps of land entries were made: one for 1830 and one for 1840. The 1830 map (Figure 10) shows the location of first land entries made by 196 individuals who appear in the 1830 census or in the 1820s poll books, or who died before 1830. Only the first land entry of each individual was mapped, both to simplify the map and to show inferred house locations, since it was assumed that houses would be located on the first land purchase made by residents. Support for this assumption comes from the fact that of 30 locations of houses known to date to the initial period of settlement, 27 are located on first purchases. A distinction must be made between first purchase and first entry. Entry refers to land obtained from the federal government, while a purchase can be made from the federal government (an entry) or from another individual. Thus, 4 of the 27 house locations mentioned above were on first purchases but not on first entries, since the first purchase the individual made was from another individual rather than an entry from the federal government. The 1830 map shows first entries rather than first purchases for each individual, except in a few cases where title searches were carried out among the county deed records, allowing identification of first purchases that were not entries. Time constraints prevented this being done for everyone in the 1830 census; thus, it is not known what percentage of first entries are also first purchases, but if the sample provided by the known house locations is any indication, it probably was quite high.

First entries for 1830 residents were plotted on a base map of the project area that shows streams and the timber-prairie boundary as mapped by the GLO surveyors in 1817 and 1818 (Figure 10). Inspection of the map shows that only one first entry is located entirely in the prairie and that there are 36 first entries that contain both timber and prairie. In addition, 34 first entries located entirely in timber were close enough to the prairie edge such that a subsequent adjacent purchase of 80 acres would have included prairie. Thus 71 (36.2%) of the 196

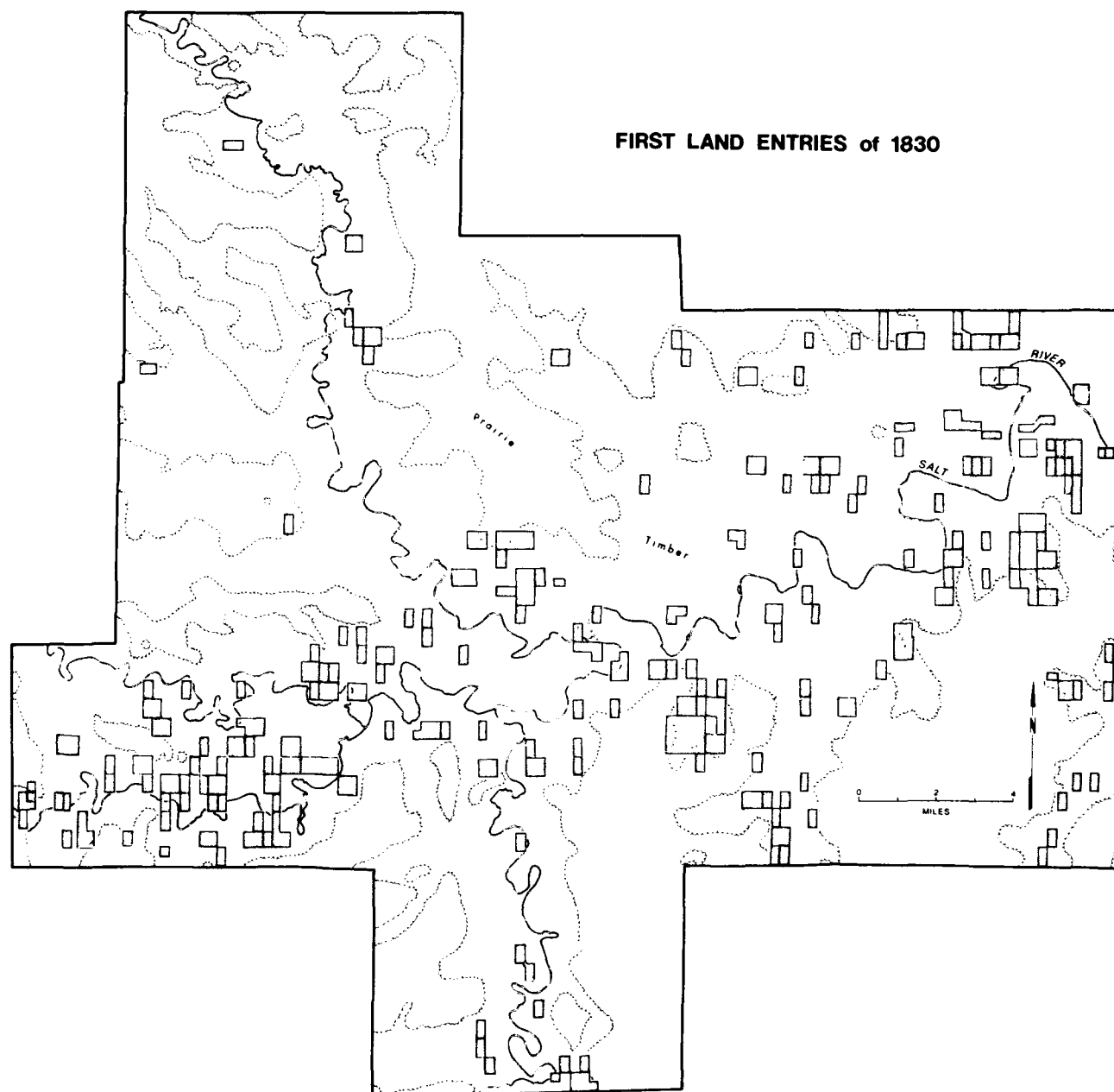


Figure 10. Map of the first land entries made by residents of the project area appearing in the 1830 census, in the 1820s Ralls County poll books, or who died before 1830.

settlers mapped in 1830 were in a position to make use of the prairie, while 125 (63.8%) were located in timber-only areas.

First entries made by residents before 1840 can be divided into two categories: those made by individuals appearing in the 1840 census (a further requirement was that the first entry had to be located in the civil township of residence of the individual as given in the census), and those made prior to 1840 by individuals not appearing in

the 1840 census but who gave Ralls or Monroe counties as their place of residence on a patent (federal deed). A total of 840 first entries makes up these two categories, of which 583 (69%) were first entries of persons appearing in the 1840 census. The other 257 first entries were probably made by persons who moved away before the 1840 census was taken or who were not heads of household in 1840 (the 1840 census only gives names of household heads). Only first entries made by persons

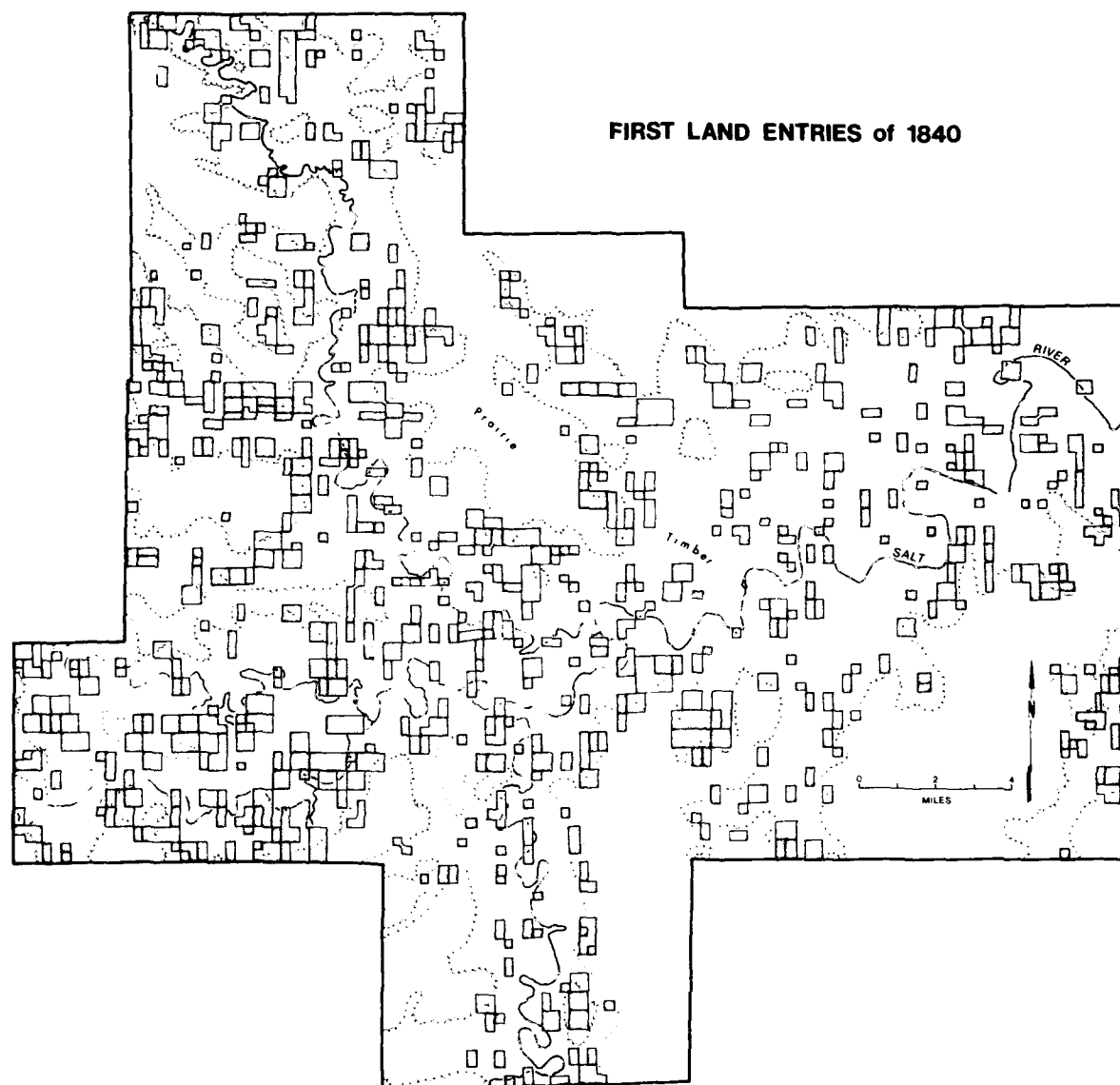


Figure 11. Map of the first land entries made by residents of the project area listed in the 1840 census.

listed in the 1840 census are shown on the 1840 map (Figure 11).

The 1840 pattern of first entries of residents in relation to timber-prairie boundaries is a continuation of the trend begun in 1830. Of the 583 first entries of persons appearing in the 1840 census, only 17 (2.9%) are located entirely in prairie. There are 161 (27.6%) first entries that include both timber and prairie and an additional 101 (17.3%) within half a mile of prairie, making a total of 262 (44.9%) settlers who probably had access to prairie land. This is an increase of 8.7% over the 1830 figure for prairie access. Thus, if first entries made by residents are representative of house locations,

it is apparent that both settlement strategies mentioned in the narrative accounts, timber-only and timber-prairie locations, were being implemented in the project area, with timber-only locations being more popular. There was a slight increase in the popularity of timber-prairie locations between 1830 and 1840.

Statistical Analysis

In order to study land entry decisions in relation to environmental variables in more detail, a multiple regression was carried out, with the number of days a tract of

land remained unsold as the dependent variable and a series of environmental dimensions as the independent variables. Time was made the dependent variable under the assumption that tracts having preferred environmental dimensions would be sold earlier than others having less preferred environmental dimensions. Four environmental dimensions that vary with soil series and that are thought to have been significant to early nineteenth-century pioneer agriculturists were used to create 26 environmental classes by using a paradigmatic classification to order the soil series in terms of values of the environmental dimensions. The four environmental dimensions are slope, vegetation, topography, and drainage. Table 13 lists the attributes of each dimension. Combinations of those attributes that occur in the project area

TABLE 13.
Attributes of Environmental Dimensions Used
in the Multiple Regression Analysis

Dimension	Attributes
Slope	1 0- 5% (level or gentle slope)
	2 5-14% (moderate slope)
	3 14-30% (steep slope)
Vegetation	1 Timber-prairie
	2 Timber
	3 Prairie
Topography	4 None (rocky)
	1 Bottoms
	2 Low terraces
	3 High terraces
	4 Slopes and ridgetops
Drainage	5 Level uplands
	1 Moderately well drained; moderately well to well drained
	2 Somewhat poorly to moderately well drained; well drained
	3 Very well drained; somewhat poorly drained
	4 Poorly drained
	5 Very poorly drained

were used to group the soil series for Monroe, Shelby (Watson 1979), and Ralls (unpublished data from the Soil Conservation Service) counties to create the 26 environmental classes used in the multiple regression (Table 14). Separate multiple regressions were carried out for each of three populations of land entrants: Eastern speculators, nonresidents, and residents. Entries made by residents were further divided into the first entry made by each individual, and subsequent entries.

Multiple regression was carried out by R. Duncan Mitchell using the Statistical Package for the Social

Sciences multiple regression program. In a preliminary run using all cases it was established that there were statistically significant differences among the populations defined above. Since significant differences were found, separate multiple regression analyses could be carried out for each population. Multiple regression produces a coefficient (beta) for significant variables. Magnitudes of beta are not comparable because of differences in standard error, but the sign of betas of variables found to be significant conveys the necessary information. In this case, a significant negative beta for an environmental class indicates earlier entry of tracts with that class and a significant positive beta indicates later entry for that class. Betas significant at the .05 level for first entries of residents are shown in Table 15, for subsequent entries by residents in Table 16, and for nonresidents in Table 17.

The environmental classes (which represent combinations of attributes of environmental dimensions shown in Table 13) that are associated with earlier first land entries of residents are EC 1, EC 5, EC 17, EC 18, and EC 25. However, EC 1 (timber-prairie bottoms) and EC 25 (mined land) each occupy only 0.1% of the project area. Thus, although statistically significant, their rarity in the project area indicates they contribute little to the overall pattern. Of more interest are EC 5, EC 17, and EC 18, which are level timbered high terraces, timber-prairie moderate slopes, and timbered ridge tops and moderate slopes, respectively. Environmental classes associated with later first entries are EC 3, EC 13, EC 14, EC 15, and EC 22. EC 3 (timbered bottoms) and EC 13 (prairie high terraces) are relatively rare, occupying 0.3% and 0.4%, respectively, of the project area. EC 14, EC 15, and EC 22, however, occupy a significant portion of the project area (Table 14) and represent level upland prairie (EC 14 and 15) and steep timbered slopes (EC 22).

Results of the multiple regression analysis of first entries of residents show that (a) moderate slopes and ridge tops in the timber and timber-prairie zone, along with level timbered high terraces, were preferred locations for settlement and (b) level upland prairie and steep timbered slopes were avoided. This confirms the general hypothesis proposed above: that house locations (as represented by first land entries of residents) were located either in timber or near the timber-prairie boundary. The more specific hypothesis that houses were located on timbered moderate slopes and ridge tops is supported but not confirmed, since houses could also have been located in the timber-prairie zone or on timbered high terraces.

Multiple regression results for subsequent entries (all entries made after the first entry by each individual) by residents (Table 16) are not as clear-cut as for first entries (Table 15). Only one environmental class, EC 19, is

TABLE 14.
Environmental Classes Used in the Multiple Regression Analysis and
Percent of Project Area They Occupy^a

Environmental	Attributes				Soil Series	Percent
	S	V	T	D		
1	1	1	1	2	Cedargap	0.1
2	1	2	1	1	Fatima, Kickapoo	2.7
3	1	2	1	3	Belknap	0.3
4	1	2	2	4	Moniteau	0.5
5	1	2	3	4	Auxvasse, Marion	1.8
6	1	2	4	3	Calwoods	1.9
7	1	2	2	5	Piopolis	6.4
8	1	3	1	4	Blackoar, Chequest	0.7
9	1	3	1	5	Wabash	0.1
10	1	3	2	3	Arbela	0.5
11	1	3	3	1	Vigar	0.1
12	1	3	3	3	Gifford	1.2
13	1	3	3	4	Chariton	0.4
14	1	3	5	3	Mexico, Kilwinning	16.3
15	1	3	5	4	Putnam	12.2
16	2	1	4	1	Gara	0.1
17	2	1	4	2	Armstrong	10.2
18	2	2	4	1	Keswick, Gosport, Weller, Winfield	15.1
19	2	2	4	2	Menfro	0.1
20	2	2	4	3	Gorin	4.3
21	2	3	4	3	Leonard, Sampsel	10.8
22	3	2	4	2	Goss, Lindley	13.1
23	3	4	4	3	Rockland	0.7
24					River, lake	0.1
25					Mine or quarry	0.1
26					No data	0.2

^aSee Table 13 for definition of attributes.

associated with earlier entries, while seven environmental classes are associated with later entries. EC 19 is the same as EC 18 (timbered moderate slopes and ridge tops) except for a slight difference in drainage characteristics. It will be recalled that EC 18 was associated with early first entries. However, EC 19 occupies only 0.1% of the project area. Environmental classes associated with later subsequent entries are EC 3, EC 7, EC 9, EC 13, EC 14, EC 15, and EC 21. These are timbered bottoms and low terraces, prairie bottoms and high terraces, upland prairie slopes (prairie edge), and level upland prairie. The lack of significant environmental classes associated with early subsequent entries may indicate a lack of shared strategies or preferences for subsequent purchases. However, the fact that certain kinds of bottoms, terraces, and the prairie edge were late subsequent entries leads to rejection of the hypothesis that terraces and prairie edges would be preferred for subsequent entries for cultivation and pasture.

Results of the multiple regression analysis for nonresidents (Table 17) indicate land entry patterns similar to

those of residents. Timbered ridges and moderate slopes (EC 18) and the timber-prairie transition zone (EC 17) are again associated with earlier entries, while upland prairie (EC 1) and timbered steep slopes (EC 22) are again associated with later entries. Differences between residents and nonresidents are confined to environmental classes that comprise only a small proportion of the project area. The only difference between early first entries of residents and entries of nonresidents is in the substitution of EC 4 (timbered low terraces) for EC 5 (timbered high terraces). It appears then, that nonresidents had a similar land entry strategy to that of residents. This may be because they intended to become residents when they made the land entry or because they intended to resell to actual residents. It is probable that at least some of these nonresidents lived near the project area in Hannibal and Palmyra (where the land office was located) and were able to personally evaluate some of the land they entered.

Drainage, which has not been mentioned so far in discussing the environmental classes, does not appear to

TABLE 15.
Multiple Regression Coefficients (Beta) for
First Land Entries of Residents^a

Environmental class	Beta ^b	Standard error
1	-247	102
3	311	101
5	-86	33
13	98	43
14	57	16
15	222	17
17	-64	13
18	-78	13
22	37	17
25	-547	174

^a $p \leq .05$

^b $R^2 = .14$

have been a significant environmental dimension. For instance, EC 5 is a timbered high terrace with poor drainage and EC 13 is a prairie high terrace with poor drainage, but EC 5 is associated with earlier first entries of residents and EC 13 is associated with later first entries of residents. EC 4 (timbered low terraces) also has poor drainage but is associated with early entries of nonresidents. Since environmental classes with good drainage characteristics are also associated with early entries, drainage appears to have had little effect on the multiple regression results.

In order to study trends through time, separate multiple regressions for first entries by residents were carried out for each of four time periods: 1818-1826, 1827-1834, 1835-1836, and 1837-1858. The first period represents a time of familiarization with the area and

TABLE 16.
Multiple Regression Coefficients (Beta) for
Subsequent Land Entries of Residents^a

Environmental class	Beta ^b	Standard error
3	389	62
7	32	14
9	387	69
13	204	60
14	31	13
15	236	14
19	-756	178
21	71	14

^a $p \leq .05$

^b $R^2 = .16$

relatively few land entries. The second period represents the major period of land entries and settlement. The short third period was characterized by land speculation and the fourth period represents disposal of the remaining, presumably poorest, land. No formal data for these multiple regressions are presented because of extremely low R^2 values (to be discussed below). Results are taken to be suggestive only of possible trends. The first part of the first period is characterized by a preference for timbered ridge tops and gentle slopes (EC 6), while the timber-prairie transition zone (EC 17) shows up late in the first period. At the beginning of the second period, timbered moderate slopes and ridge tops (EC 18) and the timber-prairie transition zone (EC 17) are significant. At the end of the second period (when 56% of all land in the category of first entries by residents had been sold) upland prairie first appears (EC 14), along with low terraces (EC 7 and 10) and timbered bottomland (EC 2).

TABLE 17.
Multiple Regression Coefficients (Beta) for
Land Entries of Nonresidents^a

Environmental class	Beta ^b	Standard error
1	-808	289
3	307	67
4	-236	106
9	768	378
11	387	117
15	65	20
17	-220	27
18	-187	29
22	99	32
26	1606	595

^a $p \leq .05$

^b $R^2 = .15$

In the third period, EC 14, EC 17, and EC 18 continue, and both timber and prairie high terraces first appear. In period four, timbered moderate slopes are no longer represented, while timbered high and low terraces and upland prairie continue to be represented. The analysis of first entries by periods indicates that it may be possible to place the environmental classes identified as being associated with early entries, by the analysis of all first entries, together in a temporal sequence beginning with timbered ridge tops and gentle slopes, followed by the timber-prairie transition zone, timbered ridge tops and moderate slopes, and finally, timbered high terraces.

A final group of entries requiring discussion is that of Eastern speculators. These entries occurred only during a one-year period during 1835 and 1836. A plot

of Eastern speculators' entries was made on a base map of the project area (not presented here), which showed that these entries were concentrated in the eastern part of the project area and occurred in both timber and prairie. Eastern speculators (or their local agents) preferred to purchase in large contiguous blocks², and there were more of these available in the eastern part of the project area in 1835. Most Eastern speculator entries in timber were made in T55N, R7W, which had the highest proportion of timbered steep slopes (EC 22) of any congressional township in the project area. As noted above, residents avoided timbered steep slopes. EC 22 occupied 25.3% of T55N, R7W and only 12.3% of T54N, R10W, which had no speculator entries. As can be seen in Figures 10 and 11, the maps of first entries by residents, T54N, R10W, was a locus of dense settlement, while first entries by residents in T55N, R7W were sparse. Thus, the only large tracts of timber still available for entry in 1835 by Eastern speculators were those with a large proportion of steep slopes that had been avoided by residents.

The Eastern speculator group was the only one that entered large amounts of central upland prairie. As can be seen in Figure 10, most large expanses of open prairie occurred in the eastern part of the project area. Entries by Eastern speculators were composed of large blocks of prairie in the southeastern part of the project area, in the prairie east of the South Fork, and in the prairie along the northcentral edge of the project area. Much of the prairie between the North Fork and Indian Creek was designated swamp land, which precluded entry through the federal land office (see previous section of this chapter).

Multiple regression also was carried out for entries of Eastern speculators, even though the maximum time between entries was only a year (Table 18). Because of this short time period, few significant results were expected. However, it was found that Eastern speculators (or their agents) also preferred timbered land. Steep timbered slopes (EC 22) and timbered bottomland (EC 2 and EC 3) were associated with early entries, and upland prairie (EC 15) and prairie terraces (EC 10 and EC 12) were associated with later entries. Although speculators appear to have preferred timbered land, it was the prairie land that in the long run became more valuable, as an unsystematic sample of resale values of speculators' land shows. Most speculators were not able to sell their land to local residents until the 1850s, when

TABLE 18.
Multiple Regression Coefficients (Beta) for
Land Entries of Eastern Speculators^a

Environmental class	Beta ^b	Standard error
2	-7	2
3	-29	12
4	73	6
10	45	21
12	60	10
13	-58	12
15	4	1
20	-8	4
22	-7	2
24	-77	18
26	-17	6

^a $p \leq .05$

^b $R^2 = .16$

federal public land at \$1.25 or less per acre was almost gone. Most speculator land sold to residents at this time was upland prairie and sold for \$3-4.50/acre. One tract of prairie that was not sold until 1864, went for \$10/acre. Sales of timbered land held by speculators were comparatively rare during this period and when sold, land was valued at \$2.50/acre. Thus, although speculators were trying to follow the same strategy as local residents in entering timbered land, they were not able to evaluate other characteristics of the land, such as slope, and ended up owning a lot of timbered steep slopes that had been avoided by residents and that never became valuable land. After most of this timbered land had been entered, Eastern speculators began to enter large tracts of upland prairie that did become more valuable when the technology (such as steel plows) to exploit it became available.

Although the results of multiple regression analysis produced combinations of attributes of environmental dimensions that were associated significantly with early or late entries for various groups, it is important to note that the R^2 values are rather low, ranging from .14 to .16. The R^2 value is a measure of the percent of variance explained by the multiple regression. Low R^2 values usually indicate that other variables not included in the analysis are affecting the data. However, before considering other variables, it should be pointed out that the use of the amount of time a tract of land remained unsold as the dependent variable rests on the assumption that land with preferred environmental characteristics was entered earlier than other land. This, in turn, assumes that entrants had knowledge of the environmental characteristics of the tract before purchasing it. Obviously, many entrants did have previous knowledge of the environ-

²Mean number of acres entered per person for Eastern speculators was 86; for residents it was 188.4.

mental characteristics, but a significant number of them may have had no more information than the locations of streams and timber-prairie boundaries, which were available on plat maps at the land office. Thus, after the decision to make an entry in the timber was made, the decision as to which specific timbered tract to enter may have approached randomness for some entrants. It can be suggested that one reason for low R^2 values is the unknown number of land entry choices made without regard to specific environmental characteristics.

Another possibility, as mentioned above, is that other variables not included in the analysis affected locational decisions. It is possible that other environmental dimensions should have been included, but it is more likely that non-environmental variables affected locational decisions. Possible economic variables are proximity to towns, roads, and grist mills. Possible social variables are proximity to relatives, to people from the same area from which they emigrated, or to people of the same religious affiliation. In other words, land entrants may have located on land with less desirable environmental characteristics in order to be near a town, road, or kin. Some of these variables will be discussed elsewhere in this monograph.

As a check on the multiple regression results, discriminant analysis also was carried out. The discriminant analysis identified which environmental classes were significant in differentiating the land entry choices of groups used in the analysis (first entries of residents, subsequent entries of residents, nonresidents, and Eastern speculators). The significant environmental classes were found to be EC 14 (upland prairie), EC 15 (upland prairie), EC 17 (timber-prairie transition zone), and EC 18 (timbered ridge tops and moderate slopes). The means for these environmental classes for the entries of each group can be used to rank-order the groups with respect to each environmental class (Table 19). These rank-orderings confirm the results of the multiple regres-

sion analysis. Residents preferred timbered ridge tops and timbered moderate slopes (high rank-order for EC 18) and the timber-prairie transition zone (high rank-order for EC 17) for their first entries and avoided the upland prairie (low rank-order for EC 14 and EC 15). Speculators, who ended up with what the residents did not want, have rank-orders opposite to those of first entries of residents.

Another result of the discriminant analysis was that population groups overlapped in land choices such that only 36% of the 8537 40-acre land units in the analysis were classified in the correct population group. In other words, the discriminant analysis could predict which population group would enter a particular land unit for only 36% of the units. Entries made by nonresidents were the least predictable, with only 4% being classified correctly. Since this is a residual category, it probably includes some unidentified residents and Eastern speculators. It also includes some residents of Hannibal and Palmyra who behaved like Eastern speculators, and probably many entrants who had intended to become residents. When nonresidents were excluded from the analysis, 46% of the land units were classified correctly. The discriminant analysis indicates, as did the multiple regression analysis, that all population groups had similar land selection strategies. However, residents were more successful in carrying out this strategy, probably because of familiarity with the environment. Some nonresidents may have been handicapped by inability to personally evaluate the land, while Eastern speculators lacked knowledge of the land and were also handicapped by not making entries until much of the preferred land was already sold.

A final test carried out was a correlation of a soil fertility index developed by the Soil Conservation Service with the number of days unsold. The fertility index is based on a recent ten-year average of yields for various crops grown in each soil series. The index employs a standardized scale that ranges from zero (lowest fertility) to 100 (highest fertility). A fertility index for each 40-acre tract was calculated from the proportion of each soil series present in the tract, and this was correlated with the number of days the tract remained unsold. If land with high fertility was entered before land with low fertility, a large negative correlation (approaching -1.0) would be expected, since high fertility indices should correlate with fewer numbers of days unsold. However, the correlation coefficient (r) was .12 for first entries of residents and .14 for subsequent entries of residents. This lack of correlation indicates the great differences in agricultural practices and technology between the early nineteenth-century and the present. The recent crop yields used to calculate the fertility index are based on the use of large machinery and the application of chemical fertilizer and pesticides, both of which are

TABLE 19.

Rank-Ordering of Categories of Land Entrants with Respect to Means of Environmental Classes Found to be Significant for Discriminant Analysis

EC 14	EC 15	EC 17	EC 18
Spec ^a	Spec	Res FE	Res FE
Res SE ^b	NonRes	Res SE	Res SE
Res FE ^c	Res SE	NonRes	NonRes
NonRes ^d	Res FE	Spec	Spec

^aSpec = Eastern speculators

^bRes SE = Subsequent entries of residents

^cRes FE = First entries of residents

^dNonRes = Nonresidents

most efficient on the level upland prairie. Wooded slopes, areas preferred by nineteenth-century agriculturists, are not suitable for modern mechanized agriculture and tend to have low fertility indices.

SPATIAL PATTERNING IN LAND ENTRIES: THE SOCIAL ENVIRONMENT

In this section the effects of social variables such as kinship, common origin, and religious affiliation will be considered. The maps of first entries made by residents for 1830 and 1840 (Figures 10 and 11) show clusters of settlement that may be the result of closely spaced tracts with preferred environmental characteristics. However, some of these clusters appear to be a result of social variables. Since data on social variables are limited, no comprehensive quantitative statements about their effects can be made. However, a few examples of the effects of social variables on settlement clustering are presented here.³

One of the earliest settlement clusters in the project area was located at the head of Griffin Hollow in sections 22, 27, and 28 of T55N, R6W (Figure 10). It was begun by a kinship group consisting of the Ely brothers (Joshua, Thomas, and Isaac) and their brother-in-law, Conrad See, all of whom came from Bath County, Kentucky, in 1819 (Owen 1895). This settlement cluster soon came to be known as the "Ely settlement," mentioned in the Ralls County road records (A:5) as early as 1823. Throughout the 1820s, other Elys settled north of the Salt River in the northwest part of T55N, R6W.

The effects of shared religious affiliation in the formation of settlement clusters were demonstrated by a large group of Catholic settlers from Scott County, Kentucky, who in 1828 began settling along the timber-prairie boundary southwest of the Ely settlement (Figure 10). This group included James Elliott and his sons (John and Matthew), Bernard Lynch, Raphael and James Leake (probably brothers), and Casper Hardy and his sons (George and Joseph). Further south along the timber-prairie boundary were Daniel and Augustine O'Brien, Abraham and William Carter, and Ignatious Leake and his sons. This is the only part of the project

area known to have been settled exclusively by members of one religious denomination. Most of them also were from the same county in Kentucky (Scott County); thus, a group of settlers who all shared the same religion, came from the same part of Kentucky, and consisted of family groups (father and sons settled near each other) formed an early settlement cluster that extended for about five miles (in a straight line) along the timber-prairie boundary from Section 20 of T55N, R6W to Section 11 of T54N, R7W. St. Paul's Catholic Church was organized about 1840 in the center of this area in Section 31 of T55N, R6W, (Figure 3).

Another Catholic settlement, begun by John F. Donnelly and Daniel B. Kendrick, was located in Section 2 of T56N, R7W. Other Catholic settlers in this area were Electus Bell (from Scott County, Kentucky), Robert and James Hagar, Levi Keithley, and Armistead Wilson. In 1845, this group organized St. Peter's Catholic Church in Section 30 of T56N, R6W (Figure 3), and completed the present stone church in 1862 (Barrows and Spalding 1957). This Catholic settlement was not as compact as the one to the south and settlers of other denominations were interspersed among the Catholics. Before St. Paul's and St. Peter's parishes were organized, it is probable that members of both groups of Catholic settlers attended a Catholic chapel in Cincinnati, a small town on the Salt River (Wetmore 1837:155).

A third Catholic settlement was located around Indian Creek, in the northern part of T55N, R8W and the southern part of T56N, R8W (Figure 11). This settlement began in 1830, with the earliest settlers being Leonard and Clement Green, Alexander and Abraham Wimssett, the Yates brothers (Raphael, Thomas, and Vincent), and Richard and Thomas Miles. In 1835 other settlers arrived, including three Pierce-all brothers (Clement, James, and Joseph), Walter Carrico and his sons (Benedict and Ignatious), and Hillary and Edward Hardesty. The Yates and Carrico families were both from Washington County, Kentucky. Specific counties of origin of the other members of this settlement are not known. The focus for this Catholic settlement was St. Stephen's Catholic Church, organized in 1833. The village of Indian Creek (Elizabethtown) was platted in 1852 with the church at its center.

The early (1820s) settlement cluster south of the Middle Fork, in T54N, R9W, was begun by various McGee families (those of John, Sr., John, Jr., John S., and Robert), John McKamey, and members of the Simpson family (Robert, John, and Walker). The McGees and McKameys were from Mercer County, Kentucky, and in 1828, founded the Pleasant Hill Presbyterian Church, (the first church organized in the project area), located in Section 16 of T54N, R9W. The Simpsons also were Presbyterians but their county of origin in Ken-

³Data for this section are from NHC (1884), Owen (1895), Henning (n.d.), MCPBOE, RCPBOE, Ralls and Monroe County marriage and probate records, and patents.

tucky is not known. Members of this settlement had important positions in early Monroe County government. Robert Simpson was president of the county court and John S. McGee and John McKamey were justices of the peace, with McGee also having served as county surveyor.

The Smith settlement, one of the two oldest settlement clusters (along with the Ely settlement), dates to 1819 and was located north of the Middle Fork in T54N, R9W, and the southernmost row of sections in T55N, R9W (Figure 10). The settlement was named for Joseph Smith, who brought a large family from Bath County, Kentucky, consisting of his sons Alexander W., Joseph H., John B., and Samuel H., his daughters Elizabeth, Ann, and Mary, and his sons-in-law John Johnson (Mary's husband) and James Adams (the husband of Elizabeth Smith). Adams entered land next to Joseph Smith (who had been assigned land in Section 34 by John D. Biggs) in 1819. Two possible brothers of James Adams, Otho and Ovid Adams, later entered land nearby, as did the Smith sons after their father died in 1825 (although Alexander W. Smith had already entered land south of the Middle Fork in 1819). Ann Smith married James C. Fox of the Middle Grove settlement (the founder of, and merchant in, Paris; see Chapter 2) in 1822, and Alexander W. Smith married Susan Fox in 1824. After John Johnson died in 1826, Mary (Smith) Johnson married Otho Adams in 1827. Ovid Adams, Samuel H. Smith, and John B. Smith all married daughters of John Yates, who arrived in 1828 and bought Joseph Smith's place from his sons. The Adams and Yates, at least, appear to have been members of the Church of Christ (now the Disciples of Christ), since Ovid Adams and Nancy Yates were married by a minister of this denomination. A church of the Church of Christ denomination was founded in the Smith settlement, but not until the 1860s. Other members of the Smith settlement who arrived in the 1820s were Matthew Mappin, Abraham Kirkland, and John Woods. Little is known about these people, especially Kirkland and Woods. Matthew Mappin and his brother James were from Bath County, Kentucky (James Mappin married John Johnson's sister in Kentucky). James Mappin originally settled in the McGee settlement but moved into the Smith settlement around 1834. Matthew Mappin married a McGee in 1826, after arrival in the area.⁴

Although the original entries made by Joseph Smith and James Adams in 1819 were located near the edge of the prairie in Section 34 of T55N, R9W (see Figure 10),

later entries made by their sons were located on the moderately timbered slopes to the south. Renewed interest in the prairie edge began in the fall of 1830, when Thomas Poage and his brothers-in-law Richard D. Powers and John Stewart arrived from Greenup County, Kentucky. Poage bought Joseph Smith's place from John Yates and Stewart bought James Adams' place. Powers bought Paul Herryford's place in Section 35, and noted in a letter to his father that each man had purchased improved places with cabins already built and that each farm was partly prairie. More land entries along the timber-prairie boundary were made by them in succeeding years. Thomas Poage's (probable) brothers, James and Robert Poage, arrived a few years later, settled nearby, and followed the same strategy. This strategy of location along the timber-prairie boundary was followed by many wealthy livestock producers (which these men had become by 1850), as will be demonstrated in the next chapter.

The formation of settlement clusters discussed above provides examples of the role of social variables (kinship, common origin and religious affiliation) in determining settlement location. These examples show that it was a common practice for family groups consisting of brothers and in-laws to immigrate together and to form a settlement cluster, with each male member establishing his own household and farm near those of other members of the family group. In some cases, their parents also were members. Within a few years other family clusters from the same county or with the same religious affiliation (or both) arrived and settled near the original family group, forming a settlement cluster.

While settlement in family groups probably was ubiquitous throughout the period of settlement in all parts of the project area, formation of larger clusters based on common origin and religious affiliation may have been more restricted. This is difficult to demonstrate, since data on origin and religious affiliation of settlers are limited. It would appear that the effect of commonality of religious affiliation was most powerful among Catholics, who formed large settlement clusters, possibly because they may have been subject to a certain amount of prejudice on the part of Protestants. The limited data available indicate that Protestants of different denominations settled together, as the proximity of the Baptist and Methodist churches on Otter Creek and the Baptist and Presbyterian churches on Pigeon Roost Creek demonstrates (Figure 3). The Pigeon Roost Creek (also known as Mt. Prairie) settlement cluster (Figure 12) is an example of a cluster where few social variables were factors in formation of the cluster. Both Baptists and Presbyterians were present and counties of origin included Clark County, Kentucky, Boone County, Kentucky, Rockbridge County, Virginia, and Augusta County, Virginia.

⁴Most of the genealogical information on the Smiths and Mappins is from Henning (n.d.).

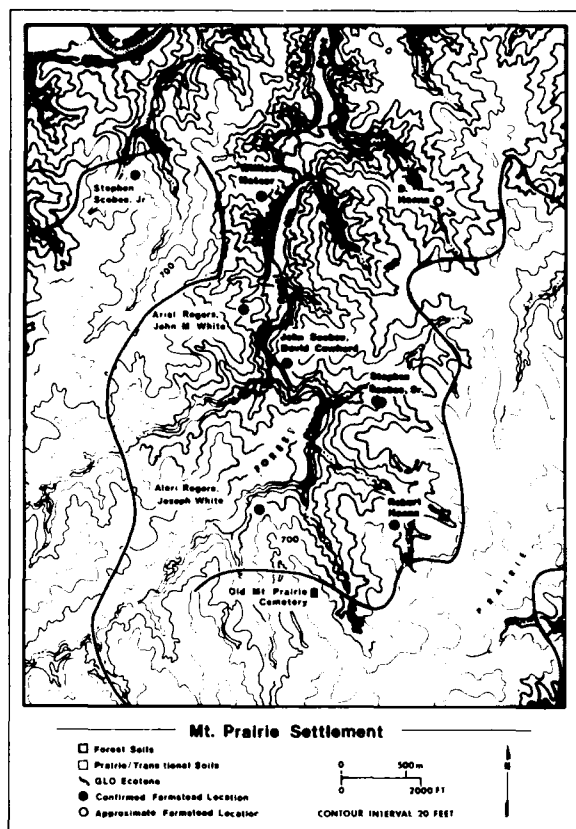


Figure 12. Map of Mt. Prairie community showing known and probable locations of early nineteenth-century farmsteads (from Warren *et al.* 1981).

SUMMARY

In this chapter, temporal and spatial patterning of land entries in the project area was investigated. It was found that the timing of land entries was due primarily to changing economic conditions, but that changes in the laws governing disposal of public lands also affected amount of land entered per year. It was found that the volume of land entries correlated with economic boom periods and the availability of credit, as Cole (1927) has shown for the nation as a whole. The beginning of settlement in the project area was the result of the 1818-1819 boom period, which coincided with the first public land sales. The succeeding period of economic depression, combined with a change to a cash-only policy for land entries, resulted in few entries during the early 1820s. The major period of land entries and settlement was from 1828 through 1836, during which

economic expansion occurred. This period culminated with intense land speculation by local residents, non-residents, and Eastern speculators during the last half of 1835 and the first half of 1836. During this year, for the first time, the amount of land entered by residents with earlier entries was greater than the first entries of arriving residents. By 1838, 90% of the federal public land in the project area had been entered. Passage of the military bounty acts and the Graduation Act slightly accelerated entry of remaining public land during the 1850s.

Spatial patterning of land entries was influenced by both environmental and social variables. Certain environmental zones were preferred by residents: timbered moderate slopes, the timber-prairie transition zone, and timbered high terraces. In the next chapter, it will be shown that these zones were associated with different agricultural complexes. Nonresidents and Eastern speculators attempted to follow similar strategies but were less successful than residents in carrying them out, probably due to less knowledge about the environment. Eastern speculators did attempt to enter land on timbered slopes, similar to that entered by residents, but obtained instead timbered steep slopes of little value. When all of these lands were purchased they switched to upland prairie and were the only group to enter the centers of upland prairie zones before 1850. Ironically, due to technological change (introduction of the steel plow), prairie land eventually became more valuable than timbered land, especially the steep timbered land entered by Eastern speculators.

Environmental zones preferred by residents were large enough and widespread enough that significant room for choice of location within them remained through much of the period of initial settlement. In other words, even if settlers restricted their land entries to preferred zones, they still had to decide on a specific location within the zone or zones. Specific locational choices may have been made on the basis of aesthetic considerations, economic considerations such as accessibility (road development will be discussed in the next chapter), or because of such social variables as kinship, religious affiliation, or commonality of origin. Examples discussed above suggest kinship was an important variable in development of small settlement clusters. Particularly important were groups of brothers and brothers-in-law who all settled near each other. Common religious affiliation (especially among Catholics) and commonality of origin were responsible for promoting the development of larger clusters in some parts of the project area. Social variables probably were most important at the beginning of settlement, when service functions were poorly developed and it was necessary to rely on members of the local group for assistance and specialized skills. Social ties facilitated this cooperation.

With the development of towns and the appearance of rural nonagricultural specialists (see Chapter 5), these connections were not as important, and as zones with preferred environmental characteristics began to fill up,

settlers probably located wherever good land (as they perceived it) was available, not being too particular about who their neighbors were.

ECONOMIC DIFFERENTIATION

In this chapter, the development of economic differentiation is discussed in terms of the differential distribution of wealth among individuals and the development of economic specialization. Wealth is measured in terms of ownership of land and slaves and may be related to persistence (length of time an individual lived in the area) and political officeholding. Economic specialization includes development of agricultural specialization (production for market) and specialization in production of goods, retail and wholesale commercial functions, and services. This functional specialization is related to town formation, which concentrates nonagricultural functions in central places to serve the dispersed rural population. The degree to which nonagricultural functions are concentrated in towns can be seen as a measure of the degree of functional differentiation achieved. This also is related to ease of access to towns, which is dependent on development of transportation networks. Thus, road construction also is an indicator of market-oriented (as opposed to basic subsistence-related) economic activity.

DISTRIBUTION OF WEALTH

In Chapter 3 it was noted that land and slaves were the principal determinants of wealth and status in the upper South. It was suggested that amassing large amounts of land and slaves was the goal of those aspiring to be community leaders and members of the "planter" class. In this section the attainment of that goal is evaluated in the context of a frontier situation where large quantities of land were available at a relatively low price.

Land

Table 20 shows the frequency distribution of the number of acres of land entered by residents before July 30, 1835, and Table 21 shows the frequency distribution for residents for the entire period of land entries, 1818-1858. It will be noted that multiples of 80 acres have higher frequencies, due to the 80-acre minimum purchase requirement in force until 1832 (see Chapter 4). For both time periods, the mean number of acres

TABLE 20.
Frequency Distribution of Numbers of Acres
Entered by Residents in the Project Area,
1818-1835

Acres ^a	Entrants	Percent	Cumulative percent
40	119	17.5	17.5
80	205	30.2	37.7
120	57	8.4	56.1
160	98	14.4	70.5
200	28	4.1	74.6
240	57	8.4	83.0
280	11	1.6	84.6
320	33	4.9	89.5
360	12	1.8	91.3
400	18	2.7	94.0
440	4	0.6	94.6
480	12	1.8	96.4
520	1	0.1	96.5
560	5	0.7	97.2
600	2	0.3	97.5
640	3	0.4	97.9
680	1	0.1	98.0
720	5	0.7	98.7
760	1	0.1	98.8
800	1	0.1	98.9
840	1	0.1	99.0
880	1	0.1	99.1
1040	1	0.1	99.2
1280	1	0.1	99.3
1520	1	0.1	99.4
1560	1	0.1	99.5
Total	679		

^a \bar{x} = 169.6

entered is between 160 and 200 acres, and about 75% of all entrants entered 200 acres or less. By far the most common entries consisted of a quarter-section (160 acres) or a half-quarter-section (80 acres). In the period before 1835 only 6% of residents entered more than 400 acres, with a maximum of 160 acres. For the entire period of land entries, 10% of residents entered more than 400 acres with a maximum of 2160 acres. Thus, judging by land entries, there was a large "middle class" of land owners with relatively modest holdings, while a minority (approximately 10% of entrants) were establishing larger "estates."

The pattern of land tenure that emerged by 1850

TABLE 21.

**Frequency Distribution of Acreage Sizes Entered
by Residents in the Project Area, 1818-1859**

Acres	Entrants ^a	Percent	Cumulative percent
40	232	19.9	19.9
80	309	26.5	46.4
120	91	7.8	54.2
160	188	16.2	70.4
200	40	3.4	73.8
240	64	5.5	79.3
280	23	2.0	81.3
320	52	4.5	85.8
360	20	1.7	87.5
400	31	2.7	90.2
440	17	1.5	91.7
480	19	1.6	93.3
520	6	0.5	93.8
560	12	1.0	94.8
600	5	0.4	95.2
640	15	1.3	96.5
680	3	0.3	96.8
720	7	0.6	97.4
760	2	0.2	97.6
800	4	0.3	97.9
840	1	0.1	98.0
880	3	0.3	98.3
920	1	0.1	98.4
960	3	0.3	98.7
1000	1	0.1	98.8
1040	3	0.2	99.0
1080	1	0.1	99.1
1120	2	0.1	99.2
1200	1	0.1	99.3
1280	3	0.2	99.5
1320	1	0.1	99.6
1520	1	0.1	99.7
1560	1	0.1	99.8
2000	1	0.1	99.9
2160	1	0.1	100.0

^an = 1164

(Table 22) was similar to the pattern of entries, with most residents owning or renting (see below for information on tenancy) 100-400 acres. The upper 10% of land owners owned 500-2000 acres. Comparing Table 21, which shows the amount of land entered per person, and Table 22, which reflects actual land-use patterns in 1850, it will be noted that the mean amount of land per farm in 1850 (Table 22) is larger than the mean amount entered per person (Table 21), and that the number of entrants is much higher than the number of individual farms in 1850. This appears to be due to consolidation of smaller holdings into larger farms. Although 20% of all entries by residents consisted of single 40-acre tracts,

only 7% of all farms in 1850 were less than 80 acres. Therefore, it appears that residents who entered less than 80 acres tended to sell out to others who were increasing the size of their farms. Thus, the 40-acre farm was rare in the project area in 1850 and may not have been economically viable. It appears that the process of competition described by Hudson (1969:367) already was in operation, at least for the lower end of the scale of farm sizes, only 20 years after the period of initial settlement.

It has been suggested that frontier residents (as well as nonresidents) engaged in land speculation, buying more land than they actually intended to use for agricultural purposes, (Billington 1945:205; Gates 1942:316). However, this strategy does not appear to have been common in the project area. A comparison of the amount of land entered before 1835 by those appearing in the 1830 census, with the amount of land owned by the same individuals in 1850 (N = 74), shows that 75% of them increased their holdings and that there was an average net gain of 100 acres per person. This is not conclusive, since they may not have begun to sell their excess land until after 1850. However, the increase in amount of land owned per person for those who

TABLE 22.

**Frequency Distribution of Number of Acres
of Land per Farm in the Project Area
in the 1850 Agricultural Census**

Acres ^a	Farms	Percent	Cumulative percent
1- 99	106	15.6	15.6
100- 199	213	31.3	46.9
200- 299	160	23.5	70.4
300- 399	91	13.4	83.8
400- 499	36	5.3	89.1
500- 599	25	3.7	92.8
600- 699	20	2.9	95.7
700- 799	5	0.7	96.4
800- 899	8	1.2	97.6
900- 999	1	0.1	97.7
1000-1099	3	0.4	98.1
1100-1199	5	0.7	98.8
1200-1299	0	0.0	
1300-1399	1	0.1	98.9
1400-1499	1	0.1	99.0
1500-1599	0	0.0	
1600-1699	2	0.3	99.3
1700-1799	1	0.1	99.4
1800-1899	1	0.1	99.5
1900-2000	2	0.3	99.8
Total	681		

^a \bar{x} = 264

TABLE 23.
Value of Land in Dollars for Households Listed in the 1850 Agricultural Census
and for All Rural Households in the Project Area in 1850

Value in dollars	Households in agricultural census ^a	Percent	All households ^b	Percent
0	24	3.5	62	7.3
1- 199	21	3.1	37	4.3
200- 399	45	6.6	74	8.7
400- 599	80	11.7	100	11.7
600- 799	65	9.5	80	9.4
800- 999	89	13.1	109	12.8
1000-1199	98	14.4	110	12.9
1200-1399	42	6.2	44	5.2
1400-1599	62	9.1	64	7.5
1600-1799	14	2.0	14	1.6
1800-1999	6	0.9	6	0.7
2000-2199	46	6.8	56	6.6
2200-2399	5	0.7	5	0.6
2400-2599	15	2.2	16	1.9
2600-2799	1	0.1	1	0.1
2800-2999	0	0.0	0	0.0
3000-3199	27	4.0	29	3.4
3500	6	0.9	8	0.9
3700	1	0.1	1	0.1
4000	13	1.9	14	1.6
4400	2	0.3	2	0.2
4500	1	0.1	1	0.1
5000	6	0.9	7	0.8
6000	3	0.4	3	0.4
7000	3	0.4	3	0.4
8000	2	0.3	2	0.2
10,000	2	0.3	2	0.2
15,000	1	0.1	1	0.1
30,000 ^c	1	0.1	1	0.1

^a \bar{x} = \$1323.21

^b \bar{x} = \$1241.15

^cIncludes the value of a mill.

remained from 1830 through 1850, indicates success in amassing land, one of the goals mentioned earlier. It would appear that acquiring land was more important than making money. Those who were not successful in acquiring at least 80 acres probably left the area.

There also were people who did not own land in the project area. Of the 681 people listed in the 1850 agricultural census (Table 23), 24 (3.5%) had no "value of real estate owned" reported in the population census, which may indicate that they were tenants or renters. Twenty-three of the 53 rural heads of household who listed their occupation as farmer in the population census, and who do not appear in the agricultural census, owned no land according to the population census. Farmers who do not appear in the agricultural census may have produced less

than \$100 worth of agricultural products, the minimum amount necessary to be listed (Wright and Hunt 1900: 235). They probably worked primarily as farm day laborers. In addition, there were 19 rural heads of household with other occupations or no occupation who owned no land.

Slaves

As discussed above and in Chapter 3, slave ownership contributed to wealth and status. Because of the absence of plantation agriculture in the upper South, some historians (Braderman 1939:451; Trexler 1914:19; Viles 1920:40) consider the prestige value of slaves to

TABLE 24.
Number and Percent of Slave-Owning Households in Salt River and Jackson Townships
in 1830 for Households of Entrants and for All Households

Township	No. of slave owners	No. of households of entrants	Percent	No. of slave owners	No. of all rural households	Percent
Salt River	38	104	36.5	40	128	31.2
Jackson	15	69	21.7	15	79	19.0
Total	53	173	30.6	55	207	26.6

have been more important than their economic value as laborers, unless cash crops such as tobacco and hemp were grown. However, in a frontier wooded environment it is probable that slave labor would have increased both the speed of timber-clearing and the amount of land that could be cleared in a season. Slaves also would have increased greatly the labor force of families with few or no male members of working age. In order to assess the role of slavery in the project area, the percentage of slave owners and the frequency distribution of the number of slaves per owner will be examined.

Tables 24-26 present information on the number and percent of slave owners for various townships in 1830 and 1840, and for the project area as a whole in 1850, a year for which data are not organized by township in the census. It should be noted that Salt River and Jackson townships in 1830 were approximately coterminous with the project area except on the eastern edge (see Figure 2). The townships for which 1840 slave ownership data are presented include areas beyond the boundaries of the project area (see Figure 3), accounting for the larger total number of owners in these townships in 1840 than in the project area in 1850.

Slave owners made up 30-40% of all rural heads of household in the project area in all three census years, with a few exceptions. There was an increase in the percentage of slave owners through time and there was a higher percentage of slave ownership among land entrants than among the population as a whole. It is interesting that Jackson Township in 1830 (see Figure 2) had less than 20% slave owners. This may have been due to lower population density, less accessibility (lack of roads), and greater distance to towns. In other words, the more extreme frontier conditions in Jackson Township in 1830, as compared to Salt River Township, may have repelled wealthier slave owners who may not have been willing to take as many risks as nonslave owners. It also is of interest that in 1830, slave owners entered a significantly ($p < .001$ level) greater amount of land than nonslave owners in Salt River Township, but that there was no significant difference in amount of land entered by the two groups in Jackson Township. This also may have been a result of more extreme frontier conditions in Jackson Township in 1830. By 1840 significant differences in the amount of land entered by both groups existed in all townships.

TABLE 25.
Number and Percent of Slave-Owning Households in Various Townships^a
in 1840 for Households of Rural Entrants and for All Rural Households

Township	No. of slave owners	No. of households of entrants	Percent	No. of slave owners	No. of all rural households	Percent
Salt River	28	73	38.4	48	140	34.3
Saline	24	58	41.4	41	111	36.9
Jackson	67	132	50.8	148	307	48.2
Jefferson	37	110	33.6	49	160	30.6
Washington	30	89	33.7	52	160	32.5
Indian Creek	9	43	20.9	12	72	16.7
South Fork	20	48	41.7	36	86	41.9
Total	223	568	39.3	386	1036	37.3

^aIncluding some households outside the project area.

TABLE 26.

Number and Percent of Slave-Owning Households in the Project Area in Ralls and Monroe Counties in 1850 for Households of Rural Entrants and for All Rural Households

No. of slave owners	No. of households of entrants	Percent	No. of slave owners	No. of all rural households	Percent
201	441	45.6	339	852	39.8

In 1840, Indian Creek Township had only 17% slave owners while Jackson Township had almost 50%. Reasons for these extremes can only be speculated upon. Indian Creek Township was settled primarily by Catholics, who as a group may have had a disdain for slavery. The high concentration of slave owners in Jackson Township probably is related in some way to the presence of the county seat in the township. Proximity to the county seat may have been a factor in the locational decisions of wealthier individuals who intended to try to influence county affairs and to seek political power. These extremes in slave ownership between townships show there was significant spatial variation within the project area that would be masked if statistics from areas the size of counties were used. Unfortunately, this is all that is available for 1850.

Frequency distributions of number of slaves per owner in 1830, 1840, and 1850 are listed in Tables 27-29. It can be seen that most owners had only a few slaves. In

TABLE 27.

Frequency Distribution of Slaves in Salt River and Jackson Townships in 1830 by Entrants' Households with Slaves and by All Households with Slaves

Slaves	Entrants		All	
	Households ^a	Percent	Households ^b	Percent
1	22	41.5	22	40.0
2	10	18.9	10	18.2
3	4	7.5	5	9.1
4	3	5.7	3	5.4
5	3	5.7	3	5.4
6	2	3.8	2	3.6
7	1	1.9	4	7.3
8	3	5.7	3	5.4
9	1	1.9	1	1.8
10	1	1.9	1	1.8
11	0	0.0	1	1.8
Totals	53		55	

^a \bar{x} = 3.1 slaves/household

^b \bar{x} = 3.2 slaves/household

each census year 75% of owners had five or less slaves. As noted in Chapter 3, ownership of six or more slaves made one a "colonel." The number of slaves owned by the upper 10% of owners increased rapidly, with the minima and maxima for this group rising from 8-11 in 1830, to 9-28 in 1840, and to 10-35 in 1850. The increase in the mean number of slaves per owner between 1830 (3.2/owner) and 1850 (4.3/owner) probably is due to this increase among the 10% of owners who had the most slaves.

TABLE 28.

Frequency Distribution of Slaves in 1840 for Households of Rural Entrants with Slaves in the Project Area and for All Households with Slaves in Salt River, Saline, Jackson, Jefferson, Washington, Indian Creek, and South Fork Townships

No. of slaves	Entrants ^a		All ^b	
	No. of households ^b	Percent	No. of households ^d	Percent
1	74	33.2	129	33.4
2	37	16.6	64	16.6
3	20	9.0	38	9.8
4	21	9.4	31	8.1
5	18	8.1	38	9.8
6	7	3.1	16	4.1
7	15	6.7	21	5.4
8	5	2.2	9	2.3
9	5	2.2	9	2.3
10	9	4.0	11	2.8
11	2	0.9	5	1.3
12	3	1.3	6	1.6
13	1	0.4	2	0.5
14	0	0.0	1	0.2
16	1	0.4	1	0.2
17	2	0.9	2	0.9
19	1	0.4	1	0.2
21	1	0.4	1	0.2
28	1	0.4	1	0.3

^a \bar{x} = 4.0 slaves/household

^b n = 223

^c \bar{x} = 3.8 slaves/household

^d n = 386

The two men with the most slaves in 1840 provide examples of the activities of owners with many slaves. Edward Shropshire had 28 slaves in 1840 and had entered 400 acres (beginning in 1831) near Crooked Creek, in Section 3 of T55N, R10W, on the west edge of the project area in Washington Township. Based on

TABLE 29.

Frequency Distribution of Slaves in 1850 in Ralls and Monroe Counties for Households of Rural Entrants with Slaves and for All Rural Households with Slaves

No. of slaves	Entrants ^a		All ^c	
	No. of households ^b	Percent	No. of households ^d	Percent
1	56	27.9	95	28.0
2	30	14.9	52	15.3
3	22	10.9	45	13.3
4	15	7.5	34	10.0
5	15	7.5	25	7.4
6	8	4.0	14	4.1
7	14	7.0	18	5.3
8	8	4.0	11	3.2
9	6	3.0	10	2.9
10	3	1.5	6	1.8
11	4	2.0	6	1.8
12	6	3.0	7	2.1
13	3	1.5	4	1.2
14	2	1.0	2	0.6
15	1	0.5	1	0.3
17	2	1.0	2	0.6
18	3	1.5	4	1.2
20	1	0.5	1	0.3
21	1	0.5	1	0.3
35	1	0.5	1	0.3

^a \bar{X} = 4.8 slaves/household

^b n = 201

^c \bar{X} = 4.3 slaves/household

^d n = 339

amount of land and number of slaves owned, he was the wealthiest man in the project area in 1840 (see below for rank-ordering of wealth). He was elected a county judge in November, 1834, and resigned in November, 1837 (John M. Clemens of the town of Florida was appointed to fill the remaining year of his term). Shropshire was in his 60s and was unmarried. Since he had no children, his entire labor force consisted of slaves. Nineteen of his 28 slaves were over the age of 10 and all 19 were listed in the 1840 census as being engaged in agriculture. According to his will, filed in 1843, he was growing tobacco.

The second wealthiest man in 1840 was William Huston, who owned 21 slaves and 760 acres of land. Most of the land (631 acres) was purchased from Andrew Rogers, one of the first Monroe County court judges, in November, 1835, and was located a few miles southeast of Florida. Huston was unmarried and was 42 years old in 1840. Only eight of his 21 slaves were over 10 years old in 1840, and in 1850 only 11 of his 35 slaves were over 10. In 1850 Huston was engaged in general

farming and was producing some flax (400 pounds) and flax seed (15 bushels), but it is not known how much labor this would have required. The large number of children among Huston's slaves suggests that Huston was raising slaves for sale. Since slave dealers were social outcasts in Missouri (Trexler 1914:45-46), this may account for the fact that Huston never held any political office and never was mentioned in the county history. After the Civil War and the resultant loss of his slaves, he was declared insane by the county court.

The percentage of slaves in the population of the project area steadily increased from 13.3% in 1830, to 18.4% in 1840, to 21.2% in 1850. However, in the state as a whole the percentage of slaves in the population declined from 17.8% in 1830, to 15.2% in 1840, to 12.8% in 1850 (Trexler 1914:10), mostly due to north-erners immigrating to upper Missouri (Gray 1958:874). Slavery in Missouri was restricted primarily to the major river valleys that originally had been settled by people from the upper South. By 1850, in the Missouri and Mississippi valleys, slaves comprised up to 30% of the population (Gray 1958:874). In the Boon's Lick area of Cooper County one owner had 72 slaves; the second highest number of slaves was 32. The mean number of slaves per owner there was 4.7 (Trexler 1914:14) and the mean for the state as a whole was 4.6 per owner (Trexler 1914:10). This compared to 4.3 per owner in the project area. Thus slavery in the project area was similar quantitatively to slavery in other river valleys of Missouri that were settled by people from the upper South, even though the region had not been settled for as long a time.

Wealth Differences

Distribution of wealth among rural residents of the project area was studied by combining data on land and slave ownership, since these were found to have been the principal determinants of rural wealth and status in the upper South before the Civil War (see Chapter 3). Wealth of town residents probably was measured more in terms of goods and cash on hand, data for which are not available. Therefore, town residents have been excluded.

The distribution of wealth in 1830, 1840, and 1850 was studied by calculating the sum of the value of land and slaves owned by each individual and rank-ordering these sums. For 1830 and 1840, amount of land owned was assumed to be equal to the amount of land entered before 1835 for the 1830 group, and before 1845 for the 1840 group. This was adjusted for a few individuals who had many slaves but who had entered relatively little land (such as William Huston, discussed above), by checking deed records for land purchases from other

individuals. Land in 1830 was assumed to have been worth \$1.25/acre, its price at the land office. In 1840 all land was assumed to have been worth \$2/acre. This value was not contradicted by a small unsystematic sample of deed records from this period. The actual value of land owned by each individual is available in the 1850 population census and averages about \$5/acre. These values from the census were used for 1850 wealth calculations.

For 1830 and 1840, only land entrants' wealth could be studied due to a lack of other land ownership data. Thus, wealth in terms of land for these years is only an approximation, since it does not take into account land purchased from other individuals and those individuals who did not enter land. In 1830 land entrants comprised about 84% of the heads of households. Hence, they are a good sample of the population, although it is biased against the poor who did not enter land. In 1840, land entrants comprised 68% of the heads of households in the two townships located entirely within the project area (Jefferson and Indian Creek). For 1850, land data are available from the census for all heads of household. However, wealth of land entrants in 1850, was calculated separately for comparison with 1830 and 1840 land entrants. Land entrants composed 52% of all heads of household in 1850.

Slave values were estimated from data for Missouri summarized by Trexler (1914:38-39). For 1830 it was assumed that each slave was worth \$300, or six times the value of each 40-acre tract of land. A more accurate valuation of slaves could have been accomplished by assigning different values to various combinations of age and sex, but this would greatly have complicated data

collection, coding, and calculation. For 1840 it was assumed that each slave was worth \$320, or four times the value of each 40-acre tract of land. For 1850, a value of \$400/slave was used, which is twice the value of an average 40-acre tract.

It will be noted that values of slaves in terms of land steadily decreased. The high value of slaves relative to land in 1830 may have encouraged a strategy of bringing slaves from Kentucky, selling them in Missouri, and entering land with the proceeds. This strategy was considered in 1836 by a then-recent immigrant to Boone County who brought 23 slaves with him. However, he did not sell them because he was "attached to them" and rented them out instead (Atherton 1944:303). In this case, at least, social values preempted economic ones. The changing relative values of land and slaves may have required periodic reappraisal of one's assets.

Once the amount of wealth for each head of household had been calculated, the heads of households were rank-ordered by wealth and grouped into percentiles such that each group consisted of 10% of the cases (deciles). The minimum and maximum for each ranked decile and the percent of total wealth represented by each decile are shown in Table 30 for 1830, Table 31 for

TABLE 30.

Distribution of Wealth^a Exhibited within Each Decile of Land Entrants, Ranked in Order from Wealthiest (1) to Poorest (10), for 1830

Rank	Minimum	Maximum	Total ^b	Percent
1	\$1650	\$4600	\$69500	47.0
2	800	1600	30250	20.5
3	450	800	16000	10.8
4	350	450	10500	7.1
5	250	350	8000	5.4
6	200	250	5700	3.9
7	100	200	3500	2.4
8	100	100	2700	1.8
9	0	100	1750	1.2
10	0	0	0	0.0

^aBased on land and slave ownership; each 40 acres of land = \$50, and each slave = \$300.

^bMean for 271 entrants is \$545.76.

TABLE 31.

Distribution of Wealth^a Exhibited within Each Decile of Land Entrants, Ranked in Order from Wealthiest (1) to Poorest (10), for 1840

Rank	Minimum	Maximum	Total ^b	Percent
1	\$2320	\$9760	\$258,160	43.2
2	1360	2320	115,680	19.4
3	960	1360	74,160	12.4
4	640	960	49,760	8.3
5	480	640	34,800	5.8
6	320	480	23,360	3.9
7	240	320	17,840	3.0
8	160	240	10,480	1.8
9	80	160	8,640	1.4
10	0	80	4,400	0.7

^aBased on land and slave ownership; each 40 acres of land = \$80, and each slave = \$320.

^bMean for 647 entrants is \$923.15.

1840, Table 32 for 1850 land entrants, and Table 33 for all 1850 household heads. These ranked deciles of wealth are referred to as wealth ranks. Wealth rank 1 is composed of the wealthiest 10% and wealth rank 10 comprises the poorest 10%. The distribution of wealth for 1850 land entrants and for all 1850 rural households is quite similar.

TABLE 32.

Distribution of Wealth^a Exhibited within Each Decile of Rural Land Entrants, Ranked in Order from Wealthiest (1) to Poorest (10), for 1850

Rank	Minimum	Maximum	Total ^b	Percent
1	\$5800	\$34000 ^c	\$549,000	44.9
2	3600	5800	203,400	16.6
3	2600	3600	137,200	11.2
4	2000	2600	99,742	8.1
5	1500	2000	73,795	6.0
6	1000	1500	56,197	4.6
7	800	1000	41,260	3.4
8	600	800	31,928	2.6
9	400	600	20,716	1.7
10	0	400	10,555	0.9

^aBased on land and slave ownership; land = \$5.24/acre and each slave = \$400.

^bMean for 441 entrants = \$2775.04.

^cIncludes value of a mill; next highest maximum is \$22,200.

although the distribution for land entrants tends to slightly overestimate the percent of wealth of the wealthiest 10%. Because of this similarity, the use of entrants only in 1830 and 1840 may provide a fairly accurate picture of the distribution of wealth for the population as a whole, especially since entrants constituted higher percentages of the population in 1830 and 1840 than they did in 1850.

For colonial America, Main (1965:276, 286) found

TABLE 33.

Distribution of Wealth^a Exhibited within Each Decile of Rural Heads of Households, Ranked in Order from Wealthiest (1) to Poorest (10), for 1850

Rank	Minimum	Maximum	Total ^b	Percent
1	\$4600	\$34000 ^c	\$654,500	40.5
2	3000	4600	303,570	18.8
3	2000	2900	199,442	12.3
4	1400	2000	146,725	9.1
5	1000	1400	97,768	6.1
6	800	1000	76,080	4.7
7	600	800	61,403	3.8
8	400	600	43,996	2.7
9	200	400	25,490	1.6
10	0	200	6,580	0.4

^aBased on land and slave ownership; land = \$5.12/acre and each slave = \$400.

^bMean for 852 entrants = \$1896.17.

^cIncludes value of a mill; next highest maximum is \$22,200.

that as subsistence farming shifted to commercial farming, social stratification increased, as measured by the proportion of taxes paid by the wealthiest 10%. In northern frontier areas the richest 10% had 33% of the wealth, which increased to 45 or 50% with the advent of commercial farming. For southern frontiers Main (1965:276) predicts the richest 10% should have had 40% of the wealth, which should have increased to 55% with commercial farming.

Lemon and Nash (1968) have discussed the problems associated with using tax lists for studying distribution of wealth. They also disagree with Main's use of the stages of frontier, subsistence, and commercial agriculture, noting that farmers in colonial southeast Pennsylvania were producing for export within two years of settlement (Lemon and Nash 1968:17). However, they did find that there was a gradual increase in the differentiation of wealth, with the richest 10% increasing their share from 24% to 38% of the taxable wealth by 1800 (Lemon 1972:11; Lemon and Nash 1968:13).

A similar increase in concentration of wealth over time occurred early in the Shenandoah Valley. In the lower part of the valley where some plantations existed, the richest 10% owned 48% of the real property and 58% of the personal property by 1800 (Mitchell 1977:121). In Trempeleau County, Wisconsin, established in 1854, Curti (1959:Table 9) found that the wealthiest 10% had 39% of the wealth both in 1860 and 1870. This was similar to the distribution of wealth in long-established rural Vermont townships during the same years (Curti 1959:78).

The data summarized above indicate there was a slightly greater concentration of wealth in southern rural areas than in northern ones, probably due to the presence of slaves in the South. Data from the project area do indicate that a slightly greater differentiation of wealth existed there than in early southeast Pennsylvania and in early Trempeleau County, Wisconsin. However, the observation made by Main, Lemon, and Mitchell that the differentiation of wealth increased over time is not substantiated by data from the project area. There, the reverse appears to have been the case, with the greatest differentiation being apparent in 1830 (the wealthiest 10% controlled 47% of the wealth) and the least in 1850 (the wealthiest 10% controlled 40% of the wealth). However, this trend may have reversed itself in subsequent years. Mitchell (1977:132) relates increasing social stratification to increasing competition for land, and in 1850, in the project area there still was a small amount of federal public land (about 5% of the project area) available. It also should be pointed out that although there appears to have been greater differentiation in the distribution of wealth in 1830 than in 1850, the range in amount of wealth (i.e., the difference between the richest and poorest), certainly was greater in 1850

than in 1830.

The most important conclusion reached from this study of the distribution of wealth in the project area is that obvious differences in wealth were present from the beginning of settlement. The greater concentration of wealth among the richest members of the population in 1830 compared to 1850 was due partly to the large proportion (11%) of landless families in 1830. Since everyone in the 1830 wealth ranking was a land entrant, this means they eventually entered land but had not yet done so by 1834. By 1840, many of them had entered land, thereby increasing the percentage of wealth owned by the poorest 10%.

It appears that both rich and poor migrated to the Salt River region, importing intact the social stratification system of the upper South based on land and slaves. However, the abundance of relatively cheap land on the frontier allowed some of the landless to become land owners, creating a substantial middle class. Inexpensive land also allowed the wealthy to become wealthier, as indicated by the increase in the range of wealth differences by 1850.

Of course, not all settlers were successful in increasing their wealth. Some of those who were not successful probably left the area. In the discussion above, the difference between the larger number of resident land entrants and the smaller number of resident land owners in 1850 was noted, along with the increase in mean number of acres per family. It was suggested that many of those who entered only 40-acre tracts sold out to others with larger farms, and then probably left the project area. This suggests there is a relationship between persistence (length of time a resident was in the area) and wealth.

Persistence and Wealth

Persistence of land entrants appearing in the 1830 census is presented in Table 34, and persistence of land

TABLE 34.
Persistence of Land Entrants Appearing
in the 1830 Census

	Number	Percent
Died before 1840	19	6.9
Present 1840	158	57.5
Absent 1840	98	35.6
Died before 1850	38	13.8
Present 1850	114	41.5
Absent 1850	123	44.7

TABLE 35.
Persistence of Land Entrants Appearing
in the 1840 Census

	Number	Percent
Died before 1850	68	10.4
Present 1850	409	62.7
Absent 1850	175	26.8

entrants appearing in the 1840 census is presented in Table 35. The population appears to have been fairly stable during the first 20 years after the first census was taken. For the 10-year periods 1830-1840 and 1840-1850, well over half the land entrants remained in the project area, and after 20 years (1830-1850), over 40% of land entrants remained. It is likely that most entrants who died (data from probate records) before the next census would have remained in the area (if they had not died), since old or sick individuals would not likely have undertaken a move. If those who died are added to those present in the next census, persistence in the project area would have been even greater.

Persistence in the project area between the first two censuses after the beginning of settlement was much greater than in Kansas and in Trempeleau County, Wisconsin, where only 25-26% of those present in 1860 remained until 1870 (Curti 1959:Table 4; Malin 1935:344). Part of this difference is due to the fact that only the persistence of land entrants was measured in the project area, while all households in the census were included in the Kansas and Wisconsin studies. Aside from this, one might speculate that upper South culture and the presence of slaves some how increased persistence in the project area, or that the effects of the Civil War decreased persistence in Kansas and Wisconsin in the 1860s.

In Trempeleau County, Wisconsin, Curti (1959:76) found that those with less property were slightly more likely to leave the county. Rice (1977:171), studying Scandinavian immigrants in Minnesota, found that value of land owned correlated with length of residence. Both studies suggest a relationship between persistence and wealth. This was tested for the project area in several ways. Wealth of land entrants present in 1850 was correlated with the number of years since first land entry. This yielded a correlation coefficient (r) of only .26. It also was found that the mean date of earliest entry of the wealthiest 10% of entrants present in 1850 is August, 1831. The mean for all first entries made by residents before 1850 is April, 1833. For the wealthiest 10% of entrants present in 1840, the mean earliest entry is June, 1831, and for all first entries made by residents before 1840 the mean is August, 1832. Thus, the

wealthiest 10% did arrive slightly earlier. Finally, the persistence of the wealthiest 20% present in 1830 was compared to the persistence of the poorest 20% present in 1830 (Table 36). First, it should be noted that there is an obvious bias in the probate records against recording deaths of the poor. However, these unrecorded deaths would affect only the percent absent and not the percent present. When the percent present after 10 and 20 years is compared for the wealthiest and poorest 20% of land entrants present in 1830, it is found that the poor actually were slightly more likely to remain than the wealthy. From the evidence presented above, it can be concluded that there is little relationship between persistence and wealth in the project area.

TABLE 36.

Persistence of Wealthiest 20% (Ranks 1 and 2) and Poorest 20% (Ranks 9 and 10) of Land Entrants Present in the 1830 Census

	Ranks 1 & 2		Ranks 9 & 10	
	Number	Percent	Number	Percent
Died before 1840	7	13.0	0	0.0
Present 1840	36	66.7	40	74.1
Absent 1840	18	33.3	14	25.9
Died before 1850	10	18.5	0	0.0
Present 1850	25	46.3	26	48.1
Absent 1850	19	35.2	28	51.9

Political Offices and Wealth

Mitchell (1978:86) has suggested that in the upper South leadership positions usually went to wealthier members of society who owned relatively large amounts of land and slaves. This was tested in the project area by determining the wealth rank in 1830 or 1840 (whichever was higher) of county officials in Monroe County from 1831 (when the county was formed) to 1840. The results are shown in Tables 37-40. The functions of most of these officials were discussed in Chapter 2. The most

TABLE 37.

Frequency Distribution of Monroe County Judges per Wealth Rank, 1831-1840

Rank ^a	1	2	3	4	5	6	7	8	9	10
Number	5	3	2	1	0	0	0	0	0	0

^aMean rank = 1.9

TABLE 38.

Frequency Distribution of Monroe County Officials (County Clerk, Treasurer, Public Administrator, Sheriff, Assessor, and Collector) per Wealth Rank, 1831-1840

Rank ^a	1	2	3	4	5	6	7	8	9	10
Number	2	5	2	4	1	1	0	0	0	0

^aMean rank = 3.0

powerful position in county government, that of county judge, was occupied only by members of the wealthiest 40% (wealth ranks 1-4) and all judges were slave owners. The one judge in wealth rank four (see Tables 30 and 31 for wealth ranks) probably should be ranked higher, since he had a store and other property of unknown value in the town of Florida, which was not included in the data for determining wealth. Mean wealth ranks for other county officials are all between 2.6 and 3.4 (ranked deciles of wealth), and two-thirds of them were slave owners. The two election judges in the

TABLE 39.

Frequency Distribution of Monroe County Election Judges per Wealth Rank, 1831-1840

Rank ^a	1	2	3	4	5	6	7	8	9	10
Number	11	4	6	4	1	0	0	2	0	0

^aMean rank = 2.6

eighth wealth rank and the three justices of the peace in the seventh and eighth wealth ranks may be rare examples of ability and integrity taking precedence over wealth. In general, however, county offices were filled by wealthier members of the community. This probably also was true of state officials. A resident of the project area (Gustavus M. Bower) was elected to the state legislature in 1842 (Holcombe 1884:40). He was in the first wealth rank and in 1840 was the sixth wealthiest individual in the project area.

TABLE 40.

Frequency Distribution of Monroe County Justices of the Peace per Wealth Rank, 1831-1840

Rank ^a	1	2	3	4	5	6	7	8	9	10
Number	5	2	4	3	1	0	1	2	0	0

^aMean rank = 3.4

Summary

In summary, data on the distribution of wealth indicate many immigrants of the project area were able to enhance their social status and wealth by amassing land and slaves. Landless households decreased from 11.1% of land entrants in 1830 to 7.3% of all households in 1850. The landless figure probably would be higher for 1830 if all households (including those who did not eventually enter land) were included. Seventy-five percent of land entrants present in 1830 increased their landholdings by 1850, and the percentage of households that had at least one slave increased from 27% in 1830 to 40% in 1850. The decrease in the concentration of wealth from 1830 to 1850 indicates that the poor were able to improve themselves, no doubt due to the frontier conditions of relatively inexpensive land and fertility of recently cleared land. However, the fact that there is little relationship between wealth and length of residence indicates that wealth brought by settlers from their points of origin was more significant than wealth created by frontier conditions. The high degree of concentration of wealth in 1830 (47% of wealth owned by the richest 10%), at the beginning of settlement (probably 75% of settlers present in 1830 had been in residence less than three years), shows that the social stratification system of Bluegrass Kentucky was reproduced to some degree immediately upon arrival in the project area.

As in older parts of the upper South, the wealthy were expected to provide leadership, and they filled most county offices. The fact that all county judges were slave owners is especially noteworthy. It is probable that the richest 10%, with 500 or more acres of land and eight or more slaves, did constitute a "small planter" class, as described by Mitchell (1978). These wealthy men were present from the earliest period of settlement. For example, Joshua S. Ely, the wealthiest individual in 1830, probably was one of the first settlers in the eastern part of the project area, arriving in 1819 (Owen 1895).

As noted in Chapter 3, another indicator of status was the type of house in which one lived. According to Kniffen (1965:555), replacement of a log house with a two-story frame I-house characteristic of the upper South signified the attainment of a certain level of status and wealth. Surviving nineteenth-century houses provide examples of this pattern in the project area. There is a range in types of houses from one-room log cabins to two-story frame I-houses. House types found in the region are described in O'Brien *et al.* (1980).

AGRICULTURAL SPECIALIZATION

Economic development of a rural area can be mea-

sured by the degree to which commodities are produced for market exchange or sale. Efficiency in production usually is achieved by specialization in production of only a few commodities, while other agricultural products are obtained through market exchange. In this section, the degree to which these processes operated in the project area before 1850, is examined. Unfortunately, data on agricultural production before 1850 are limited. The first federal agricultural census was taken in 1840, but only county-wide totals are available; the 1850 agricultural census was the first to record data by separate farms. Therefore, it is necessary to infer earlier agricultural trends from the results evident in the 1850 agricultural census.

Statistics summarizing the 1850 agricultural census for farmers in the project area are presented in Table 41. The agricultural census supposedly includes all farms that produced more than \$100 worth of commodities, and only livestock one year or older were enumerated (Wright and Hunt 1900:235). Crop yields obviously are estimates (apparent from the overrepresentation of numbers divisible by 10) and apply to the previous fall's harvest (1849), since the census was taken in June 1850.

Table 41 shows that the wide variety of crops and livestock characteristic of upper South agriculture (see Chapter 3) was produced in the project area in 1850. Almost everyone grew corn and raised swine and cattle, the mainstays of upper South agriculture. The number of farms raising sheep and producing wool is somewhat surprising, since sheep usually are not mentioned as being characteristic of upper South agriculture. Almost all farms had a few milk cows for milk and butter and a few horses for agricultural traction. Fodder for livestock, in addition to grass and corn stalks, was supplied by oats and hay, which were produced by a majority of farmers. Household consumption often was supplemented by potatoes, and almost half of all farms also produced significant amounts of fruits and vegetables (orchard and garden products). It is possible that many fruit trees produced peaches for making brandy, which sold for \$1/gallon in Kentucky in 1802 (Michaux 1904:241). Although hay production, dairy products, and orchards were not characteristic of upper South settlers in southern Illinois and Indiana (Power 1953:95, 97), these commodities were common in the project area. It may be that the nonslave-owning poorer farmers who moved north practiced a less diversified form of agriculture.

The commodities discussed above all played a part in supplying the household with food and fiber (wool), and if production of these commodities was increased beyond household needs, they could have been sold or exchanged. However, other commodities produced in the project area in 1850 were not items of household consumption. These commodities include mules, tobacco, and hemp. Flax and flax seed probably also fit in this

TABLE 41.
Production Statistics for 681 Project Area Farms in 1850^a

	Number ^b	Percent ^c	Mean ^d	S.D. ^e	Maximum ^f
Horses	679	99.7	5.0	2.9	25
Oxen	211	31.0	3.4	1.9	10
Mules & Asses	96	14.1	8.9	15.8	103
Swine	670	98.4	30.6	22.0	175
Cattle	610	89.6	13.9	19.6	200
Sheep	595	87.4	26.0	17.7	170
Wool (lbs.)	575	84.4	57.2	39.9	300
Milk Cows	674	99.9	4.5	2.9	30
Butter (lbs.)	662	97.2	153.5	102.1	1000
Cheese (lbs.)	62	9.1	45.5	40.0	200
Corn (bu.)	680	99.9	832.1	608.1	5000
Wheat (bu.)	466	68.4	82.2	85.1	700
Rye (bu.)	30	4.4	27.3	14.2	60
Oats (bu.)	562	82.5	181.3	202.7	1500
Barley (bu.)	5	0.7	16.6	10.4	30
Buckwheat (bu.)	30	4.4	24.6	27.5	150
Hay (tons)	465	68.3	6.2	6.8	60
Clover Seed (bu.)	4	0.6	1.2	0.5	2
Grass Seed (bu.)	21	3.1	6.0	8.0	35
Peas and Beans (bu.)	24	3.5	17.2	22.0	90
Irish Potatoes (bu.)	520	76.4	17.8	14.8	160
Sweet Potatoes (bu.)	259	38.0	15.5	14.3	100
Garden Products (\$)	323	47.4	13.7	18.5	150
Orchard Products (\$)	315	46.2	25.8	27.8	250
Maple Sugar (lbs.)	53	7.8	126.2	142.7	800
Molasses (gallons)	41	6.0	10.9	30.6	200
Honey (lbs.)	125	18.4	41.6	32.2	200
Tobacco (lbs.)	75	11.0	2898.7	3210.6	17000
Hemp (tons)	14	2.0	1.2	0.6	3
Flax (lbs.)	169	24.8	82.6	86.2	500
Flax Seed (bu.)	118	17.3	3.6	3.3	22
Hops (lbs.)	10	1.5	7.0	6.6	20

^aData compiled from the 1850 agricultural census.

^bNumber of farms raising or producing the commodity.

^cPercent of farms raising or producing the commodity.

^dMean number of units of the commodity per producing farm.

^eStandard deviation.

^fMaximum value for the commodity.

category, although small amounts of flax were used to make homemade linen and linsey-woolsey fabric, and flax seed was used to make naseed oil, used in tanning and in paint and varnish. Hemp was used to make rope and bagging for cotton baling. Tobacco, hemp, and flax production were labor intensive and usually were associated with slave labor (Gates 1960).

Table 41 shows that the percent of farmers producing nonsubsistence items discussed above ranges from 2% (hemp) to 25% (flax) in 1850, indicating that at least these farmers were producing for market. Comparable figures are not available for 1840, but the 1840 agricultural census for Monroe County does show that tobacco

and flax were being grown at this time. However, since flax and hemp were combined into one category in 1840, it is impossible to determine if hemp (which was a much rarer commodity than flax in 1850) was being grown.

Table 42 lists production amounts for various commodities in 1840 as amounts per family for Monroe and Ralls counties. The number of families was calculated by dividing the mean number of persons per household in 1840 (i.e., 6.4, as determined in Chapter 3) into the population of the county. Amounts per farm in 1850 also are given for comparison. These figures are not very useful since it cannot be determined how many households were producing a commodity in 1840, and Mon-

TABLE 42.

Comparison of Production of Various Commodities Expressed as Amount Produced Per Family, for All Families Present in Monroe and Ralls Counties in 1840 and in the Project Area in 1850

Commodity	Monroe 1840 ^a	Ralls 1840 ^b	Project area 1850 ^c
Tobacco (lbs.)	122.8	139.7	319.2
Flax and hemp (lbs.)	4.7	73.4	69.8
Horses and mules	3.1	3.9	6.2
Cattle	5.8	7.8	12.4
Swine	19.9	24.8	30.1
Corn (bu.)	331.2	345.5	830.9

^an = 1485 families

^bn = 695 families

^cn = 681 families

roe and Ralls counties contain land outside the project area. However, it is possible to state that market production of tobacco had begun by 1840, but that flax and hemp production was rare, at least in the western two-thirds of the project area (Monroe County).

Commercial production of tobacco, hemp, and mules in Monroe County is indicated in an 1837 gazetteer. An "extensive hemp-manufactory" was said to be "nearly completed at Florida" and there were two "tobacco manufactories in Monroe, one of which is located at Jonesborough" (Wetmore 1837:121). It also was noted that 200-500 mules were sold annually as soon as they were weaned. They would have been more valuable if sold when more mature, but there were no facilities for raising them (Wetmore 1837:121). Mules were raised in the upper South for export to the lower South, where they were preferred over draft horses for field work because they were hardier, ate less, did not require as much shelter, and were able to "stand violent work" (Ashton 1924:8; Gray 1958:852). Since mules are not able to reproduce, replacements from the upper South were always in demand. The raising of mules in Missouri began in the 1820s, when Mexican donkeys (asses or burros) were imported via the Santa Fe trail and were bred to Kentucky horses. Stock was improved through the importation of European jacks beginning in 1838 (Ashton 1924:18).

Further information on early commercial livestock production is available from newspaper accounts and county fair records (Ashton 1923a, b, 1924). For example, Samuel Curtwright, of Monroe County, was a prize winner in the jack stock category at the Boone County Fair in the early 1850s, and Richard D. Powers, another resident of the project area, was a prize winner for jack stock in 1853 at the state fair (Ashton 1924:24). Willis Samuel, also a resident of the project area, sold a mule that took first prize at the state fair, and which measured 16:3 hands and weighed 1460 pounds, to a St. Louis man for \$400 (no date given) (Ashton 1924:22). In 1856

Samuel Curtwright imported "one fine jack, three years old, 1 1/2 hands high, costing \$1500 dollars," according to the *Hannibal Messenger* (Ashton 1924:44). The jack came from Kentucky to Hannibal by steamboat.

Avery Grimes, a Monroe County resident (who must have lived outside the project area) who won several prizes at state and county fairs in the 1850s for shorthorn cattle, was breeding shorthorns in Monroe County by 1842 (Ashton 1923b:71). The importance of Monroe County as a shorthorn producing area in the early 1850s is attested by a competition at the 1853 Boone County Fair between three shorthorn steers from Boone County and three from Monroe County. Judging was based on combined weight. Monroe County lost with a total weight of 7520 pounds, compared to Boone County's 7620 pounds (Ashton 1923b:39). The owner of one of the Monroe County steers, Pleasant McCann, owned land in the project area. The co-owners of the winner of the aged bull class at the St. Louis Fair in 1856 were Grimes, McCann, and Samuel Curtwright (Ashton 1923b:43).

From newspaper accounts, it appears that Louisiana, on the Mississippi River in Pike County, was an important pork packing center by 1828 (Ashton 1923a:44). Breeds and weights of hogs in the Hannibal area are available for 1841 (Ashton 1923a:50), but pork packing there undoubtedly began earlier than this. Definite documentation exists for Hannibal to be classified as an important pork packing center in the 1850s (Ashton 1923a:55).

The above discussion indicates mules, cattle, tobacco, and, possibly, swine and hemp were being produced for market by 1840. The evidence for grain crops is not clear, however, since there is little information on consumption requirements. For colonial southeastern Pennsylvania, Lemon (1967a:68) estimates a requirement of 10-15 bushels of grain (mostly wheat) per person per year. This probably is not applicable to corn requirements in upper South agriculture, where corn was a

principal food for both people and livestock. At any rate, 330 bushels, the average amount of corn produced per family in 1840 (Table 42), would have fed 22 people at 15 bushels/person. Amounts beyond those required for human consumption probably were used to fatten swine and cattle so that surplus corn was marketed as livestock rather than as grain.

In order to study producers of market commodities in 1850, it was necessary to set arbitrary minimum yields and minimum numbers of livestock per farm in order to define producers for market. While these amounts may not serve to define farms that actually were market producers, they do provide a sample of large-scale agricultural producers in the project area, most of whom probably were producing for market exchange or sale. The 12 commodities employed in the study and the minimum amounts necessary to be considered a market commodity producer are presented in Table 43. The minimum was defined as the mean plus one standard deviation (see Table 41) for commodities consumable or usable on the farm (swine, cattle, sheep, milk cows, corn, wheat, orchard products, and flax). The minimum for mules and asses was set at five, since more than four mules probably would not have been necessary for agricultural traction. All producers of tobacco and hemp were included since these commodities were not usable on the farm in anything but extremely small amounts.

TABLE 43.

Minimum Production Amounts Necessary to be Considered a Market Commodity Producer for Various Commodities

Commodity	Unit	Minimum
Mules and asses		5
Swine		53
Cattle		33
Sheep		44
Milk cows		8
Corn	Bushels	1441
Wheat	Bushels	168
Orchard products	Dollars	54
Tobacco	Pounds	1
Hemp	Tons	1
Flax	Pounds	169
Flax seed	Bushels	7

Table 44 shows the number of farmers producing various commodities as defined above. Farmers producing one or more market commodities comprise 45% of all farmers in the agricultural census of the project area. Thus, almost half of all farmers were producing relative-

TABLE 44.
Frequency Distribution of Number of Market Commodities^a

Commodities	Farmers	Percent
0	377	55.4
1	162	23.8
2	58	8.5
3	41	6.0
4	18	2.6
5	13	1.9
6	8	1.2
7	3	0.4
8	0	0.0
9	1	0.1

^aAs defined in text.

ly large amounts of at least one commodity. Twenty-one percent of all farmers produced more than one market commodity. By examining the frequency distribution of commodities produced by farmers producing only one market commodity (Table 45), it is evident that tobacco was the preferred market commodity if only one were produced. For 69% of all farmers producing tobacco, that crop was the only market commodity produced, and thus appears to represent agricultural specialization in the project area in 1850. However, only 11% of all farmers produced tobacco.

TABLE 45.

Frequency Distribution of Market Commodities^a for Farmers Producing Only One Market Commodity

Commodity	Farmers	Percent
Mules and asses	6	3.7
Swine	18	11.1
Cattle	10	6.2
Sheep	12	7.4
Milk cows	7	4.3
Corn	16	9.9
Wheat	10	6.2
Orchard products	13	8.0
Tobacco	52	32.1
Hemp	4	2.5
Flax	11	6.8
Flax seed	3	1.8

^aAs defined in text.

The 12 market commodities can be grouped into categories as follows: livestock, grain, orchard products, and noncomestibles (tobacco, hemp, flax). Table 46

TABLE 46.
Number of Farmers Producing Various
Combinations of Categories of
Market Commodities

Category	Number
Livestock	75
Grain	25
Orchard products	13
Non-comestibles	72
Livestock; grain	66
Livestock; non-comestibles	11
Livestock; orchard products	6
Grain; orchard products	1
Grain; non-comestibles	10
Orchard products; non-comestibles	0
Livestock; grain; orchard products	6
Livestock; grain; non-comestibles	17
Grain; orchard products; non-comestibles	0
Livestock; orchard products; non-comestibles	0
Livestock; grain; orchard products; non-comestibles	2

shows the number of farmers producing these categories or combinations of categories. This table illustrates the importance of livestock raising and shows that the combination of livestock and grain was much more common than grain production alone. This suggests that high levels of grain production (primarily corn) were maintained primarily for the purpose of fattening livestock. The importance of the livestock-grain combination is demonstrated further by farmers who produced combinations of three categories of market

commodities. Combinations of three categories not including both grain and livestock did not occur in the project area. The other important category is non-comestibles (primarily tobacco). One can conclude that there were two major market commodities in the project area in 1850: livestock and tobacco. Farmers who produced tobacco tended to have tobacco as their only market commodity, while livestock producers usually produced several kinds of livestock plus grain. There also were 17 farmers who produced market quantities of livestock, grain, and tobacco, and two farmers who produced market quantities of all four categories.

Table 47 shows the relationship between wealth (in terms of the wealth ranks defined in the previous section) and market production of livestock-grain and tobacco. The tobacco column includes producers of tobacco whether or not they also produced other market commodities, while the tobacco-only column shows producers whose only market commodity was tobacco. The table indicates that livestock-grain producers were among the wealthiest members of the project area, while producers of tobacco occur in all wealth ranks, with the majority being in the middle wealth ranks. Half of the 10 tobacco producers in the wealthiest rank also were livestock-grain producers. While 82.6% of livestock-grain producers were slave owners, only 40% of tobacco producers and 36.5% of producers of tobacco-only were slave owners.

Table 48 presents agricultural activities of farmers in the richest wealth rank. Livestock-grain production, livestock-only, and livestock-grain-noncomestibles make up the bulk (77%) of the market production of the wealthiest farmers. Only 6 (9%) of the 70 wealthiest farmers did not qualify as market producers of livestock.

TABLE 47.
Frequency Distribution within Wealth Deciles^a of
Market Livestock-Grain Producers,
Tobacco Producers, and Producers Whose Only
Market Commodity Was Tobacco

Rank	Livestock-grain	Percent	Tobacco	Percent	Tobacco only	Percent
1	44	47.8	10	13.5	2	3.8
2	20	21.7	2	2.7	1	1.9
3	12	13.0	13	17.3	9	17.3
4	8	8.7	4	5.3	2	3.8
5	7	7.6	14	18.7	10	19.2
6	1	1.1	13	17.3	10	19.2
7	0	0.0	6	8.0	6	11.5
8	0	0.0	5	6.7	5	9.6
9	0	0.0	4	5.3	4	7.7
10	0	0.0	4	5.3	3	5.8

^aRanked in order of wealthiest (1) to poorest (10).

TABLE 48.

**Number of Farmers in Richest Decile Producing
Various Combinations of Categories of
Market Commodities**

Category	Number
Livestock	15
Grain	2
Orchard products	0
Non-comestibles	2
Livestock; grain	29
Livestock; non-comestibles	4
Livestock; orchard products	1
Grain; orchard products	0
Grain; non-comestibles	2
Orchard products; non-comestibles	0
Livestock; grain; orchard products	3
Livestock; grain; non-comestibles	10
Grain; orchard products, non-comestibles	0
Livestock; orchard products, non-comestibles	0
Livestock; grain; orchard products; non-comestibles	2

Thus, instead of a wealthy, slave-owning "small planter" class which, according to Mitchell (1978), was characteristic of Bluegrass Kentucky and the upper South in general (see Chapter 3), there was a wealthy, slave-owning class of stockmen in the project area in 1850. Apparently, slave cowboys were more common than slave tobacco cultivators.

It is now possible to discuss preferred environmental characteristics in terms of the agricultural activities of land entrants. In Chapter 4 it was determined that timbered moderate slopes, the timber-prairie transition zone, and high terraces were preferred for early settlement. These zones now can be associated with production of certain market commodities. Almost all (52 of 54) livestock producers in the richest wealth rank in 1850 for which a location could be determined, were located in the timber-prairie transition zone. This same pattern probably was present in 1840, when 48 of 53 members of the richest wealth rank for whom a location could be determined were located in the timber-prairie transition zone. Since many of the same farmers were in the richest wealth rank in 1840 and 1850, it is probably safe to assume that wealthy stockmen entered land in the timber-prairie zone upon arrival in the area. Their strategy probably was to cultivate the lightly timbered transition zone and to pasture their livestock on the open prairie.

The upland prairie zone either was owned by Eastern speculators (see Chapter 4) or remained federal public land until after 1850. After 1850, residents of the project area began to enter the remaining prairie public land and

to purchase prairie land held by Eastern speculators. As discussed in Chapter 4, this may have been a result of acceptance of the steel plow, allowing cultivation of the prairie. However, before the mid-1850s the upland prairie probably was considered to be open range, for the use of everyone settled on its margin. It would be interesting to trace the fortunes of wealthy livestock producers after the prairie became private property. It is possible that some of them were able to purchase prairie to maintain their pasture area while others were left without pasture.

Tobacco producers in 1850 were located primarily along streams emptying into the North Fork, especially along Crooked Creek. There also was a smaller group of tobacco producers along the Salt River, a few miles east of Florida. Both areas have relatively high terraces, and it is probable that tobacco producers preferred this environmental zone. If a farmer produced both livestock and tobacco, he usually owned both timber-prairie border and high terrace land. From 1850 census data the farmer (James Ragland) who produced the most tobacco (8.5 tons) was located near Crooked Creek and had a tobacco curer living with him. This may indicate Ragland was fire-curing or flue-curing, which required "great skill" in controlling the temperature, but which produced tobacco suitable for export (Gray 1958:777). The usual method of curing was by the sun, which required less skill but produced tobacco unsuitable for export. It is possible that some of Ragland's tobacco-producing neighbors also made use of the services of the tobacco curer. The presence of a tobacco-curing specialist indicates an attempt to produce a better product that would be in greater demand on the open market.

The third environmental zone preferred for early settlement was timbered moderate slopes. The strategy there no doubt consisted of slash-and-burn agriculture for corn and wheat plus raising hogs that foraged in the forest. Corn probably was fed to hogs prior to slaughtering. It was to the farmer's advantage to own as much land as possible, which enabled him to continue shifting cultivation as long as possible, delaying a necessity to adopt crop rotation and manuring. This kind of extensive agriculture still was common in Missouri in 1849 and was described by a Cooper County farmer in a letter to the *Cultivator*:

Farming here is conducted on the regular *skimming* system—taking everything and returning nothing, and new as the country is, numbers of farms are beginning to feel and show the effects of it . . . most of the farmers in this country *scratch over a great deal of ground but cultivate none* [cited in Lemmer 1948:234; emphases in original].

The author of the letter describes competition among farmers in planting more corn than their neighbors: "the cry is still more land, more corn" (Lemmer 1948:234). Livestock was fed corn and allowed to graze on the

prairie, but no timothy or clover was sown and manuring was "looked on as preposterous" (Lemmer 1948: 235).

In summary, production of agricultural commodities for market had begun by 1840, if not earlier, and was well developed by 1850. Three kinds of agricultural specialization are evident in 1850: grain (primarily corn) and grazing livestock (cattle, milk cows, sheep, and mules) production; tobacco production; and corn and forest-foraging livestock (swine) production. Grain and grazing livestock production was carried out by wealthy slave owners along the timber-prairie border. Tobacco production was carried out by farmers of moderate means with few or no slaves (although the few producers of large quantities of tobacco did own slaves) on high terraces. Some of the wealthy livestock producers also grew tobacco if they owned high terraces. The rest of the farmers in the project area were engaged in corn and hog production on timbered moderate slopes, producing a surplus of these commodities for sale or exchange whenever they were able to do so. It appears to have been the goal of most farmers to produce most food items necessary for their own subsistence requirements and then to produce one or more commodities for market.

TRANSPORTATION NETWORKS

The establishment and maintenance of public roads was one of the most important functions of county government. The procedure for creating roads began with a petition filed with the county court by a resident of the township through which the proposed road was to pass (MCCR; RCRR). A petition requested a road between two places (usually towns or existing roads) and suggested a general route. The county court then appointed commissioners who were residents of the area through which the road was to pass to mark a route. The commissioners submitted a report specifying the proposed route, and if there were no objections, the route was declared a public road. If objections were made by property owners, the court could appoint a new commission to reroute the road. Not all petitions were acted upon; apparently the court could decline to appoint commissioners or could reject their report.

Road construction and maintenance was carried out under the direction of overseers of road districts. Road districts and their overseers were at first designated by the county court, but later this responsibility was delegated to one of the justices of the peace in each township. Labor for road construction, which was directed by the road overseer, probably was organized through the poll

(head) tax on all unmarried men between the ages of 20 and 50 (Megown 1878:10). It is probable that one could elect to work on the roads in lieu of paying the poll tax in cash, and slave owners may have provided the labor of their slaves instead of their unmarried sons. Road construction probably amounted to little more than cutting down trees. In 1836 the Monroe County court ordered road overseers to "cut down all dead or dry timber that is standing within 40 feet of any road" (MCCR A:351). In 1837 the court specified that all roads were to be cleared 30 feet wide, leaving no stumps higher than 8 inches and that "all wet land and small watercourses are to be causewayed or bridged" (MCCR A:510).

The road network as it existed in 1830 is shown in Figure 3. The road system consisted primarily of three long-distance routes that connected New London with Fayette to the west, with Columbia to the southwest, and connected Palmyra with the New London-Fayette road. The New London-Fayette road probably was in existence by 1820, at least as a rough trail, and may have been established by the Pike County court before the organization of the Ralls County court in 1821. A road from Palmyra that passed through the Smith settlement and joined the New London-Fayette road was established in 1825. The New London-Columbia road was established in 1828 and passed mostly through uninhabited prairie except where it crossed Lick Creek and the South Fork of the Salt River. These long distance routes originally were established for persons traveling between towns rather than for the convenience of rural residents, although the Ralls County court did require the Palmyra road to pass through the Smith settlement. The New London-Fayette road was, no doubt, instrumental in providing access to the area for early settlers. It is no accident that most settlement clusters shown on the 1830 map (Figure 10), such as the Ely settlement, the Lick Creek settlement, the Pigeon Roost Creek settlement, the Smith settlement, and the McGee settlement were located within a few miles of this early road (see Chapter 2 for discussion of these early settlements).

The only roads established before 1830 that had primarily local functions were located in the eastern part of the project area. These roads passed through several settlement clusters (including the Ely settlement) and connected Bouvet's Lick in the northeast corner of the project area with the New London-Fayette road (Figure 3). Previously existing roads connected Bouvet's Lick with Hannibal and Palmyra. Thus, by 1830 settlers in the eastern part of the project area had good road connections to New London and Hannibal. It was about 9 miles to New London and 17 miles to Hannibal from the Ely settlement. The western part of the project area had road connections to Palmyra and New London but a longer trip was required. From the junction of the

Palmyra and Fayette roads it was 38 miles to Palmyra and 30 miles to New London. This is beyond the maximum distance (25 miles one way) for a round trip in one day for a horse and wagon (Moline 1971:26).

Rapid immigration to the western part of the project area in 1830 and 1831 allowed formation of Monroe County and two new towns, Florida and Paris (the county seat), in 1831. The new Monroe County court immediately began to receive petitions for roads, and in 1832 it established seven roads with a total length of 44 miles within the project area. In 1833 it established six roads having a combined length of 43 miles. These roads (Figure 3) connected the new county seat (Paris) with the New London-Fayette road, with Florida and Hannibal to the east, with Columbia to the south, with Huntsville in Randolph County to the west, and with Oakdale to the north in Marion County (Shelby County after 1836). Roads also were established linking Florida with the New London-Fayette road, with Oakdale, with the Palmyra road, and with Hannibal. After 1836, when the towns of Clinton-Jonesburg and Santa Fe were platted, roads were established to connect them with already established roads and towns. All this activity in Monroe County stimulated road development in western Ralls County. Roads were established to connect with Monroe County roads and to provide access to Florida and its mills.

Table 49 provides statistical data on development of

TABLE 49.
Number of Roads and Miles of Road Established
per Year in Ralls and Monroe Counties and
Cumulative Road Density^a

Year	Number	Miles	Cum. miles	Road density
1823	1	1	1	0.002
1824	1	10	11	0.023
1825	2	48	59	0.123
1826	0	0	59	0.123
1827	0	0	59	0.123
1828	2	30	89	0.185
1829	2	11	100	0.208
1830	0	0	100	0.208
1831	1	8	108	0.225
1832	9	62	170	0.354
1833	6	43	213	0.444
1834	3	23	236	0.492
1835	7	39	275	0.573
1836	1	3	278	0.579
1837	5	28	306	0.638
1838	3	35	341	0.710
1839	4	16	357	0.744

^aMiles of road per square mile.

the road network. The formal establishment of the New London-Fayette road and the Palmyra road is reflected in the mileage for 1825, while the New London-Columbia road appears in the 1828 total. The increased road construction activity that followed the organization of Monroe County is apparent in the number of new roads and amount of mileage for 1832 and 1833.

The column in Table 49 listing the number of road miles per square mile of area provides a measure of road density. These figures do not include the pre-1825 New London-Fayette road. By 1840 the density had reached 0.75 miles of road/mi². This compares with a modern average for the project area of about 1.4 miles of road/mi². Thus, the density of roads was over half the present density within the first 20 years of settlement. The 1840 road density meant that the average maximum distance of any point from a road was about 1.3 miles. Road density was uneven, however, and a few places can be found on Figure 3 that were over two miles from a road. The highest road density in 1840 was in T54N, R10W, south of Paris, where the beginning of the later ubiquitous Midwest grid system of roads is apparent. This high road density (about 1.1 miles of roads/mi²) is related to high population density in the area and the radiation of roads outward from Paris. Proximity to the county seat probably also was a factor in obtaining approval for roads from the county court.

Another factor in the approval and routing of roads probably was social position and wealth of the petitioner and the commissioners. The mean wealth rank, on a scale of one (richest) to 10 (poorest), of successful road petitioners was 2.7 ($n = 34$; $s = 1.9$). The mean wealth rank of commissioners, who were responsible for determining the routes of new roads, was 3.2 ($n = 110$; $s = 2.1$). In reading descriptions of the routes of new roads, it is obvious that roads frequently were routed past the houses of rich land owners. Thus, the richer members of the community, who controlled county government (as demonstrated in a previous section of this chapter), appointed road commissioners of similar social status and wealth, assuring that the wealthy would have easy access to roads leading to market towns. The rapidity with which rural areas were connected to new towns and new towns were connected to larger market centers outside the project area (creating a relatively high road density) indicates the degree to which access to markets was sought from the beginning of settlement.

Another indication of the degree to which access to outside markets was sought was the attempt by entrepreneurs in Florida to open the Salt River to steamboat navigation from Florida to the Mississippi River. These entrepreneurs were aided in this endeavor by the state legislature, which passed a law in 1831 prohibiting damming the Salt River below the forks at Florida, and which chartered the Salt River Navigation Company in

1837 for the purpose of making the river navigable by dredging, changing its course, or constructing locks and dams (see Chapter 2). The Monroe County court also assisted the entrepreneurs by appropriating \$500 in 1834 for clearing the river between Florida and the county line. A railroad company also was incorporated to build a railroad between Florida and Paris. Neither venture was implemented due to lack of capital, but they do provide a measure of the lengths to which residents of the area were prepared to go to secure transportation links with external markets.

MILLS AND TOWNS

The rapid development of towns and milling facilities indicates that there were present from the beginning of settlement needs that could only be satisfied by participation in a market economy. As noted in the previous section, the eastern part of the project area was within a day's wagon trip of New London and, in some cases, of the larger river port of Hannibal. However, the western two-thirds of the area was beyond a day's travel from New London or from any town during the 1820s. This area remained sparsely settled until improving economic conditions allowed increased immigration and settlement, which began about 1828 and continued through 1835. The increase in population was so great that within only three years (in 1831), the western two-thirds of the area plus territory farther west was organized into a new county (Monroe) and two towns (Paris and Florida) were founded. Thus, it appears that services provided by towns and a county government (especially road construction) were needed and became available as soon as there was sufficient population to support them. Smaller rural service centers were founded to the north (Clinton-Jonesburg) and to the south (Santa Fe) in 1836 as population increased in these areas.

Mills

Evans (1974:320) suggests that mills served as transitional links from a subsistence to a market economy. The miller served as a buyer of grain, as a middleman, and as a merchant. The appearance of mills probably signaled the beginning of participation, or at least the potential for participation, in a market economy by rural residents. Undoubtedly, for many the mill merely served to turn their grain into flour or meal for home consumption, but for those who produced a surplus, the mill provided a local market outlet for bulk grain that was expensive to transport more than a few miles. The

presence of a mill actually may have stimulated increased grain production for sale or exchange at the mill. Most mills in the project area were water-powered and were both grist and saw mills. The first water-powered mill built in the project area was located on Lick Creek, near its junction with the New London-Fayette road (Figure 3). This mill was in existence by September, 1828, when it was mentioned in the Ralls County Road Records (A:11) in conjunction with a request for a change in the route of the road around the mill by its owner, James W. See. The construction date of the mill is unknown since there is no record of a writ of *ad quod damnum* (see Chapter 1). See died in 1839 and the property passed to his wife, but the will does not mention a mill.

The beginning of the town of Florida may perhaps be traced to the construction in 1829 of a mill on the South Fork, directly south of the future location of Florida, by Peter Stice (Gregory 1965:5). Stice sold this mill to Hugh A. Hickman and John Saling in November, 1830 for \$1000.¹ William N. Penn operated a store in the mill (NHC 1884:92), and along with Hickman and others, was one of the founders of Florida. Hickman bought Saling's interest in 1835 and operated the mill until 1868. Soon after Hickman took over the mill, he transported a load of flour to the town of Louisiana on the Mississippi River by boat and returned with sugar, coffee, and other commodities not obtainable locally (Wetmore 1837:120). This illustrates the commercial functions of early millers. Hickman was the wealthiest person in the area in 1850, largely due to his mill that undoubtedly made up a large part of his \$30,000 worth of real estate.

A second mill was built just north of the future site of Florida, during the fall of 1830 (Powers 1931) by Richard Cave, another founder of Florida. Cave sold this mill in August, 1835, during a period of land speculation, to Hugh Meredith (who recently had arrived from Pennsylvania) for \$3500. Meredith did not operate the mill himself but leased it to R.E. Coontz (according to an 1840 deed of trust). In December, 1840, Meredith somehow managed to convince Napoleon B. Tapscott of Marion County (probably Hannibal) to purchase the mill for the astonishing price of \$10,000. Tapscott soon defaulted on a mortgage and the mill passed in 1843 to Meredith's sister, Susan, of Marion County. Susan Meredith married David J. Garth, a

¹Most data on mills in this section are from MCDR, RCDR, MCCR (writs of *ad quod damnum*), and RCCCR (writs of *ad quod damnum*).

Hannibal lumber magnate, and this couple sold the mill in 1851 through an intermediary to Alexander M. Hickman and Hugh A. Hickman of Florida for \$5000. From 1851 to 1868 the Hickmans operated both Florida mills, with Hugh Hickman running the one on the South Fork and Alexander, his son, running the mill on the North Fork. The north mill passed to Alexander's younger brother, Joseph G. Hickman, who ran it until 1888.

A third mill was built near Florida (about a mile upstream on the North Fork) in 1833 by Benjamin Bradley, a wealthy farmer who lived about 1.5 miles north of the mill. Bradley had a horse-drawn corn mill near his house as early as 1827 (NHC 1884:106). Three more mills were proposed in the vicinity of Florida during the 1830s. After Cave sold his mill to Meredith in 1835, he filed a petition for a writ of *ad quod damnum* for a dam and mill to be built downstream below the forks. When Meredith objected, Cave was denied permission to build his dam. Franklin Bowles petitioned to build a dam and mill below Hugh Hickman's mill on the South Fork in 1838, but Hickman objected and eventually bought Bowles' land in 1845. John M. Clemens proposed building a mill just above the forks on the South Fork in 1838 and, as discussed in Chapter 2, construction may have begun before Clemens left Florida in 1839. However, there is no indication that a mill ever operated there.

Two mills were built on the Middle Fork near Paris (Figure 3), soon after the site was chosen as the county seat in early June, 1831. John Saling, Hugh Hickman's partner in the mill at Florida, petitioned for permission to build a mill and dam about two miles west of Paris on June 2, 1831. The mill was in operation by 1833, when the county court approved a road connecting it to Paris. It was sold to Warner Philips in 1836 for \$1200. In 1832 another mill was built about a mile east of Paris on the Paris-Florida road, by William Armstrong. In 1837 he sold the mill for \$2000 to Joseph S. Hoskins, who may have operated a distillery in conjunction with it (NHC 1884). Hoskins and his partner, Greenville Hutchison, were not very successful during this period of economic depression, judging by the number of mortgages on the mill, finally losing it through default in 1842 to David W. Major, a wealthy farmer. The mill property remained in the Major family until 1870.

A mill adjacent to the future site of the town of Clinton on the North Fork (Figure 3) was proposed in 1834 by Daniel Hendricks of Marion County. He sold the mill site in 1835 to George Glenn and Samuel Bryan for \$150. They filed a new petition for a writ of *ad quod damnum* in 1835 and platted the town of Clinton in August, 1836. They also operated a ferry adjacent to the mill, both of which were in operation by May, 1836.

In December, 1835, Henry Kinote filed a petition for

a writ for a mill on the south bank of the South Fork, opposite the future site of Santa Fe. Santa Fe was platted in October, 1836 by John Bybee. However, before this occurred, Kinote sold the mill site and 203 acres in August, 1836 to John Crigler of Mississippi for \$913. At some point, a mill was constructed there since one appears on this site in the 1876 atlas of Monroe County (Edwards Bros. 1876). In August, 1837, Kinote paid \$1000 for another mill, which had been built earlier that year by William Bybee. The mill, located three miles north of Santa Fe, was mortgaged by Kinote to a Paris merchant. After Kinote defaulted in early 1840, the mill was sold in 1843 to William Lamme for \$1500. The mill must have ceased operation before 1848, when the land on which it was located was sold for only \$175. When it was sold again in 1866, it was worth only \$250.

Several mills were built away from town sites. Joseph Sproul, a wealthy farmer in the McGee settlement, filed a petition for a writ of *ad quod damnum* for a dam and mill on the Elk Fork (Figure 3) in June 1831. The mill was sold in 1844 to Peter Stice for \$2000. In 1847 he sold it to Sproul's son, Joseph E. Sproul, and James Higginbotham for \$2000. In 1838 a mill was built by Peter Stice in Section 7 of T54N, R8W, on the Middle Fork. The mill was operated by Stice until 1843, when he sold it to John Stewart for \$2000 and bought Sproul's mill. Stewart sold the mill in 1846 to five men, among them David McKamey, for \$1000. They rented the mill to Jacob Rickenbaugh, who actually operated it. The mill was sold in 1868 to Anthony C. Smithey for \$1200.

There were few mills in the eastern part of the project area, due to the law prohibiting the damming of the Salt River below Florida. In 1838, a mill and dam were proposed for Section 30 of T55N, R6W, on the Salt River, but the court stipulated that a lock would have to be built into the dam, and no dam or mill was built. A mill on Clear Creek, in the northeast corner of the project area, is mentioned in the road records, and in 1838 a mill was built on Spencer Creek in the southeast part of the project area. The latter mill passed into the hands of Joshua Ely, a wealthy farmer from the Ely settlement.

A steam mill, owned by two wealthy businessmen from Hannibal (John McKee and William Muldrow), was in operation by 1837 on the Salt River in Section 33 of T56N, R6W. Half-interest in the steam mill, the town plat of Bloomfield, and 1000 acres of land were sold to Andrew Woods in 1837 for \$7000. Woods defaulted in 1840 and the property was purchased at a sheriff's auction by Foster Ray of Marion County, who sold it back to John McKee for one dollar in 1849. A steam saw mill owned by William Gosney was in operation in Section 15 of T54N, R9W, sometime between 1840 and 1860, when Gosney defaulted on a loan and lost his property through foreclosure.

The career of Peter Stice, described in the county history (NHC 1884) as a Dutch millwright, is of interest since he seems to have been an itinerant mill builder and operator. He built the south Florida mill in 1829 and immediately sold it. Around 1836, he then built a mill near Bethel (to the north of the project area) in Shelby County (NHC 1884:69). Returning to the Florida area, he built the mill on the Middle Fork west of Florida in 1838, operated it for five years, sold it, and bought Sproul's mill on the Elk Fork. He kept this mill only three years and then departed for Adair County, Missouri, on the upper Chariton River, where he no doubt built more mills. It is possible that he was hired to build some of the other mills in the project area owned by farmers or merchants who may not have had the knowledge necessary to construct them.

Mills in operation in the project area by 1840 were spaced 6-10 miles apart (Figure 3), so that most residents were within 3-5 miles (in a straight line) of a mill. An exception to this was the northcentral part of the project area, where some residents were up to 10 miles away from a mill. However, all residents were within a one day round trip of a mill. All mills were accessible from nearby county roads, although there was no county road to Sproul's mill on the Elk Fork until 1837, when the road from Santa Fe to Paris was established. It is probable that informal local roads existed in this area before establishment of the county road.

All these mills ground corn for local consumption. However, to have wheat ground into flour, it was necessary to go to Hickman's Florida mill (NHC 1884:660). In 1837, two or three mills were employed in "merchant work" in Monroe County (Wetmore 1837:119), two of which apparently were located at Florida where "two flour mills do merchant work" (Wetmore 1837:120). These may have been the only mills with the capacity to produce flour for export. The probability that some of this flour was exported is suggested by Hickman's trip to Louisiana with flour (see above) and by the term "merchant work." The presence of two other mills near Florida (Figure 3) suggests the beginning of a milling central place with specialization in flour production by the two large Florida mills. The smaller outlying mills may have ground corn into meal for home consumption. The demand for mill facilities at Florida must have been great since three more mills were proposed for the Florida vicinity. This probably was related to the expectation of steamboat transportation to the Mississippi River.

Towns

Although mills were factors in the locations of the

towns of Florida, Clinton, and Santa Fe, as discussed above, other functions also may have preceded formal platting of towns at these locations. A "settlement on the South Fork" was mentioned in a January, 1835, road petition (MCCR A:161) and elections for South Fork Township were held at a school probably located there (MCCR A:111), before the platting of Santa Fe in 1836. A school on Deer Creek in the Martin settlement, located about a mile east of Clinton, was the site for elections in Washington Township (MCCR A:111) before the platting of Clinton in 1836. Thus, a combination of a recognized "settlement," a school, a polling place, and a mill preceded the formal beginnings of the towns of Santa Fe and Clinton. These towns became small service centers for the townships of South Fork and Washington, respectively.

The location of Florida, platted in 1831, was a direct result of the presence of two mills (one with a store associated) at the presumed head of navigation of the Salt River. Three of the five founders of Florida were the two mill owners and the storekeeper. In the eastern part of the project area, the ban on dam construction on the Salt River and the consequent lack of mills at Newport and Cincinnati may have inhibited growth of these towns. The proposed town of Bloomfield, which never materialized, was located adjacent to a steam mill on the lower Salt River.

The location of Paris, the county seat, was the result of a political decision, rather than independent economic factors. As described in Chapter 2, the site of the county seat was chosen by a committee of men who seemed to be under the influence of James C. Fox, a local entrepreneur on whose land the town was located. The area around Paris was undeveloped in 1831; there were no roads, mills, schools, or other economic facilities in the vicinity. However, because the town was the county seat, it was provided with road connections by the county court, and its administrative functions immediately attracted economic functions, as the competitive bidding for town lots close to the courthouse site demonstrates (see Chapter 2).

Paris and Florida were almost the same size, in terms of population, in 1840 (Table 50). By 1850, Paris began to expand at the expense of Florida, and by 1860, Florida had almost disappeared while Paris had almost doubled its 1850 population. Clinton-Jonesburg, Santa Fe, Cincinnati, and Newport remained villages with 100 or less people. Newport was the least successful of these villages (the only merchant went bankrupt in 1838; see Chapter 2), and it is doubtful that it had any economic functions after 1840. Clinton-Jonesburg was abandoned when the Hannibal and St. Joseph Railroad was completed in 1857 and all stores and services moved north to the new towns of Hunnewell and Shelby on the rail line (NHC 1884).

TABLE 50.

Population of the Towns of Paris, Florida, Clinton-Jonesburg, Santa Fe, and Cincinnati, in 1840, 1850, 1860, and 1876

	1840 ^a	1850 ^a	1860 ^b	1876 ^c
Paris	289	572	1000	1400
Florida	281	316	160	100
Clinton-Jonesburg	88	99	-	-
Santa Fe	27	74	120	110
Cincinnati	60	50	?	?

^aFrom manuscript census schedules.

^bFrom Sutherland and McEvoy (1860).

^cFrom Polk (1876).

The population history of these towns (Table 50) indicates that Paris and Florida were competing for the status of primary rural service center for the project area and beyond. The success of Paris can be attributed to the fact that it was the county seat, combining administrative and economic functions, while the potential of Florida as a river transport center never was realized. By 1860, if not earlier, Florida was reduced to the status of a village serving primarily the residents of the township in which it was located. Other villages served similar functions. The economic functions of these towns and villages will be analyzed in the next section.

The pattern of towns and villages that was to endure for many years (Paris, Florida, and Santa Fe still exist) was formed almost simultaneously with initial settlement of the project area. All towns were functioning by 1836, only eight years after the beginning of the major influx of settlers in 1828. By 1836 there was a regular pattern of towns spaced about 12 miles apart, making it a journey of only a few hours in a wagon to the nearest town from anywhere in the project area. The demise of Newport would be expected, since it lay between Florida and Cincinnati, which were about 12 miles apart in a straight line. Newport was only 5 miles from Cincinnati and 7 miles from Florida, which was too close to compete successfully with the already established latter town.

There undoubtedly was a relationship between population density and town formation, but it is difficult to determine whether some minimum population density was required before towns could form. Population densities can only be calculated for 1830 and 1840, before and after town formation occurred, since no population data are available for the specific years when towns were founded. In 1830, when there were no towns in the project area, the population density in Salt River Township in the eastern portion of the project area (Figure 2) was 2.7/mi² and the density of Jackson Township in the western part of the area was about

1.7/mi². These figures do not reflect the true nature of the area because of the clustered distribution of settlement (Figure 10), especially in Jackson Township. There, settlement was absent in the northern half and occurred primarily along the New London-Fayette road in the southern part of the township. Two towns (Paris and Florida) were founded in this more densely settled area one year later (in 1831) after a heavy influx of new settlers. The population density of the area surrounding these towns at the time of their founding is unknown.

TABLE 51.

Population and Population Density of Various Political Townships in 1840^a

Township and town	Population	Area (mi ²)	Density ^b
Jackson (rural)	2050		
Paris	218	133	17.1
Jefferson (rural)	1039		
Florida	209	65	19.2
Washington (rural)	1035		
Clinton-Jonesburg	83	104	10.8
South Fork (rural)	587		
Santa Fe	24	83	7.4
Saline (rural)	696		
Cincinnati	60	102	7.4
Salt River	795	131	6.1
Indian Creek	507	60	8.5
Totals	7303	678	

^aDoes not include slaves.

^b $\bar{x} = 10.8$

Population densities for 1840 political townships (Figure 3) indicate a rough correlation between the population density of a township and the population of its town (Table 51). The two townships without towns (Salt River and Indian Creek) were served by towns in adjacent townships. Much of the population of Indian Creek Township was within eight miles of Florida or Clinton. Cincinnati was located on the boundary between Saline and Salt River townships, serving the populations of both. It can only be concluded that if there was a minimum population density threshold for town formation, it was about 2-7 persons/mi². Since parts of these townships were uninhabited prairie area, these figures should perhaps be higher.

In reality, viability of towns probably was dependent on a certain number of people living within a certain distance of the town, who regularly made use of its services. Thus, population densities based on the boundaries of political townships are not very useful. Not only the number of people, but the level of demand

TABLE 52.
Population and Population Density of the
Project Area by County in 1850^a

County	Population	Area (mi ²)	Density ^b
Monroe (rural)	3824		
Paris	440		
Florida	283		
Clinton-Jonesburg	149		
Santa Fe	64		
Total	4760	307	15.5
Ralls (rural)	1648		
Cincinnati	50		
Total		147	11.6
Totals	6462	454	

^aDoes not include slaves.

^b $\bar{x} = 14.2$

for a town must be taken into account. The level of demand in the project area appears to have been such that a town could be supported by about 500 people within a 6-8 mile radius. This is a very tentative estimate based on a few examples and should be checked with data from other areas. Table 52 shows that the system experienced moderate growth in overall population density and size of towns by 1850.

NONAGRICULTURAL SPECIALIZATION

The rapid appearance of nonagricultural specialists in the project area indicates the degree to which specialized skills and commodities not available on the farm were sought by early settlers. With the appearance of the first towns in 1831, it became possible for rural residents to participate in a market economy that was connected to the national economy through Hannibal and Louisiana, the nearest Mississippi River ports.

Data from County Records and Narrative Sources

Although statistical information on nonagricultural specialization is not available until the 1840 census, some information is available for earlier periods. The establishment of water-powered grist and saw mills was discussed in the previous section and it was noted that one of the earliest mills, located just south of Florida, had a store in operation by 1830. However, the first mill was horse-powered and dates to 1827. It was located on the farm of Benjamin Bradley (who later built a water-

powered mill on the North Fork), about two miles northeast of Florida (NHC 1884:106). Early blacksmith shops that may have been in operation as early as 1828 or 1829 were located on the New London-Fayette road in Section 17 of T54N, R8W, and Section 18 of T54N, R9W, operated by Charles Eales and James H. Smith, respectively (NHC 1884:92; MCCR A:18). In 1830 there was a store and wool-carding machine in the house of Green Caldwell on the New London-Fayette road near James H. Smith's blacksmith shop (NHC 1884:132). This location might have developed into a town had not the location of Paris been determined politically.

After establishment of Monroe County in 1831, the number of licenses that were issued to merchants, grocers, vendors of liquor, and tavern operators indicates the rapidity in development of commercial activity (MCCR). The issuance of four liquor licenses between June, 1831, when the county was organized, and November, 1831, indicates that at least one market commodity was in great demand. Four merchant's licenses also were issued during this period. The first grocer's license was issued in 1833, after the fee was lowered from \$10 to \$5. The initial lack of demand for grocer's licenses may have been due to the existence of a farmer's market in Paris that was planned when the town was platted, but the records do not mention whether it actually was constructed and placed into operation. In any case, the demand for local foodstuffs initially may have been less than that for imported manufactured goods and commodities (such as sugar and coffee), due to home production and informal exchange of surpluses between adjacent farms and among kin. However, after 1833, competition and turnover among grocers in Florida and Paris was great, with 22 individuals having been granted licenses before 1840. Most of these individuals probably were in business for only one or two years. A grocer's license was issued for Jonesburg just before it was platted in 1836, and one for Clinton was issued in 1837.

Specific information on merchant's licenses is not available, but merchants appear to have been less numerous than grocers. Being a merchant may have required more capital for importation of manufactured goods, which is corroborated by the fact that most recorded merchant's licenses were issued to partnerships, while grocer's licenses were issued primarily to individuals. The first tavern license for Paris was issued in 1832 and for Florida in 1833. By 1833 there were three taverns in Paris and at least two in Florida.

The 1837 gazetteer of Missouri (Wetmore 1837) provides some information on nonagricultural specialization for that year. There were seven "mercantile houses" in Paris, four in Florida, two in the north part of Monroe County (probably at Clinton and Jonesburg), and a "great number of smaller dealers" (Wetmore

1837:118). There were two stores and a tavern in Cincinnati and one store in Newport (Wetmore 1837:155). In 1836, a total of \$200,000 worth of goods was imported by Monroe County merchants (Wetmore 1837:118).

Little information on craft specialization and manufacturing is available for the project area, although the gazeteer does mention "four or five distilleries" and a pottery (Wetmore 1837:120). These distilleries were said to produce 10,000 gallons of whiskey and 1000-3000 gallons of brandy and gin per year. According to deed records, one was near the mill located a mile east of Paris (NHC 1884) and another was located near Benjamin Bradley's mill west of Florida. The pottery was operated by John Sears, and was located on a clay deposit near Otter Creek about five miles north of Paris:

On Otter Creek there is found sand and clay, suitable for stoneware, and 'a potter, who hath power over the clay, is there making one vessel to honour, and another to dishonour,' as a temperance devotee would insist [Wetmore 1837:120].

If Wetmore's quote is more than merely literary allusion, it is possible that Sears was supplying whiskey jugs to the distilleries. The site of Sears' pottery was located during field reconnaissance, and samples from the site match much of the crockery found during excavation of pre-1860 house sites throughout the project area.

Statistical Data

Statistical information on nonagricultural specialization begins with the 1840 census, which lists the number of persons in each household employed in agriculture, commerce, manufacturing, or who were "learned persons." The latter category probably includes teachers, doctors, lawyers, and ministers. The 1850 census lists a specific occupation for each working member of the

household. These occupations can be grouped into the 1840 census categories for comparison with the 1850 data. However, data for 1840 and 1850 are not directly comparable, since slaves appear to have been included in the 1840 figures but not in the 1850 ones. This is especially problematic for agricultural workers as exemplified by the case of William Huston. He had no children but had eight people employed in agriculture in 1840, who undoubtedly were his eight slaves. In 1850, he was listed as a farmer, but there were no occupational data listed for his slaves, who were listed on a separate schedule. This probably is not a problem for the commerce and learned persons category, since few slaves engaged in these activities. However, it is possible that there were skilled slaves engaged in manufacturing for their owners. There also is a possibility that older children were included in the 1840 census figures but not in the 1850 ones.

In order to avoid comparability problems, statistical information was compiled both for individuals and households, which were treated as units, no matter how many individuals participated in the same activity within them. If more than one nonagricultural activity was carried out within a single household, each activity was counted as a separate "shop." It should be reiterated that the area from which the 1840 data were taken extends outside the project area. Therefore, the percentages for 1840 are more significant than are the actual numbers for comparison with the 1850 data.

Data on the economic activities of individuals in 1840 are presented in Table 53. About 12% of the working individuals were engaged in nonagricultural activities in 1840. In rural areas this figure was 7%, but in towns, about 80% of individuals pursued nonagricultural activities. Table 54 presents similar data for a sample of northern frontier counties, northern settled counties, southern frontier counties, and southern settled counties, compiled by Davis (1977:Table 19). The project area was more similar to the northern frontier

TABLE 53.

Number and Percent of Persons Employed in Agriculture, Commerce, Manufacturing, and as "Learned Persons" in Rural Areas and Towns in Jackson, Washington, Indian Creek, Jefferson, South Fork, Salt River, and Saline Townships in 1840^a

	Rural		Town		Total	
	Number	Percent	Number	Percent	Number	Percent
Agriculture	2230	93.3	39	20.6	2269	88.0
Commerce	6	0.3	31	16.4	37	1.4
Manufacturing	127	5.3	102	54.0	229	8.9
Learned	27	1.1	17	9.0	44	1.7
Totals	2390		189		2579	

^aIncludes persons living outside the project area.

TABLE 54.

Percent of Persons Employed in Agriculture, Commerce, Manufacturing, and as "Learned Persons" in a Sample of Northern Frontier Counties, Northern Settled Counties, Southern Frontier Counties, and Southern Settled Counties in 1840^a

	Northern frontier	Northern settled	Southern frontier	Southern settled
Agriculture	85	70	95	85
Commerce	2	3	1	3
Manufacturing	11	25	3	11
Learned	2	2	1	1

^aData from Davis (1977: Table 19).

than the southern frontier and approached the level of the southern settled areas. Davis attributes the presence of slaves in the South as the reason for the differences in numbers of the northern and southern nonagricultural specialists. Slaves on plantations probably performed many of the skilled activities which in the North were performed by independent craft specialists. Davis, however, does not discuss the possibility that slaves might have been included in the 1840 occupational enumeration, as suggested above for the project area. In any case, the greater similarity of the project area to northern frontier counties than to southern frontier counties may have been due to the lack of a plantation system in the project area. It is unfortunate that Davis did not compile separate statistics for the upper South, since its economic system seems to have been transitional between, and distinct from, both the lower South and the North.

Table 55 presents data for the project area based on the occupations listed for individuals in the 1850 census. By then, 19% of those individuals whose occupations were listed in the census participated in nonagricultural activities. Unfortunately, variations in classification techniques between the 1840 and 1850 censuses make it difficult to determine whether the increase was real, or was an artifact of procedural differences.

Tables 56 and 57 present data on economic activities of households, rather than individuals, for 1840 and 1850, respectively. At the household level, nonagricultural activities assume greater importance, with about 20% of all households engaged in them during 1840, and about 25% during 1850. Tables 56 and 57 reveal that a significant number of households combined agricultural and nonagricultural activities and that the increase in nonagricultural economic activities between 1840 and 1850 is due entirely to an increase in the percentage of households that combined both types of activities. This is demonstrated by the fact that the percentage of households performing only nonagricultural activities remained the same (about 14%) for both 1840 and 1850. This trend is apparent in both rural areas and towns.

The more complete information available in the 1850 census schedules indicates that a variety of relationships characterized households with both agricultural and nonagricultural activities. In some cases the head of the household was a farmer who had a craft specialist with a different last name living with him and, in other cases, the craft specialist was one of the farmer's sons. There also are cases where the craft specialist was the head of the household and one or more of his sons was a farmer. The combination of agricultural and nonagricultural economic activities probably was a means of risk reduction, since losses in one activity might have been balanced by gains in the other. However, it is surprising that the combinations of activities increased between 1840 and 1850, since it would be expected that greater economic security would have been attained with the development of greater economic specialization after the passing of frontier conditions.

A trend more in agreement with expectations is the increasing concentration of nonagricultural activities in towns. The distribution of individuals and households with nonagricultural occupations located in both towns and rural areas during 1840 and 1850 is shown in Tables 58 and 59. In 1840, the majority of nonagricultural activities was located in rural areas, while in 1850 the majority of nonagricultural activities was located in towns. While about 80% of all commercial activity (merchants, grocers, etc.) was located in towns both in

TABLE 55.

Number and Percent of Persons with Agricultural and Nonagricultural Occupations in the Project Area in Ralls and Monroe Counties in 1850

	Rural		Town		Total	
	Number	Percent	Number	Percent	Number	Percent
Agricultural	1318	91.1	43	18.1	1361	80.8
Nonagricultural	128	8.9	195	81.9	323	19.2

TABLE 56.

Number and Percent of Households with Agricultural Activities Only, Agricultural plus Nonagricultural Activities, and Nonagricultural Activities Only, in Rural Areas and Towns, in 1840*

	Rural		Town		Total	
	Number	Percent	Number	Percent	Number	Percent
Agriculture only	907	86.6	11	10.5	919	79.6
Agriculture and nonagriculture	62	5.9	7	6.7	69	6.0
Nonagriculture only	79	7.5	87	82.8	166	14.4
Totals	1049		105		1154	

*Includes households outside the project area.

1840 and 1850, the shift in nonagricultural activities to towns in 1850 was largely a result of a change in location of manufacturing or craft activities. In 1840, 56% of all households with manufacturing activities, were located in rural areas while in 1850 the figure was 45%.

Although there was some movement of manufacturing activities into towns between 1840 and 1850, the amount of rural manufacturing was quite high for both census years, indicating that towns were serving as central places for commercial functions, but that manufacturing and craft functions remained largely decentralized. The locations of rural nonagricultural activities during 1840 are shown in Figure 3. The distribution appears to be somewhat random, with little tendency to form clusters, although there is a tendency towards locations near roads. The distribution of rural manufacturing in 1850 (not illustrated) is similar to the dispersed 1840 pattern with the exception of a few small clusters near the future locations of the towns of Indian Creek (platted 1852) and Perry (platted 1866).

The large proportion of craft and manufacturing activities located in rural areas, their dispersed distribution, and the high proportion of households that carried out both nonagricultural and agricultural activities indicates that the location of craft specialists may have been determined partly by social relationships rather than strictly by economic forces. The security of living with

or near relatives engaged in agriculture may have outweighed the advantages of a central location. Craft specialists who were not related to the head of the household may have participated in some sort of patron-client relationship and may have contributed agricultural labor to the household, as well as being engaged in their craft. These individuals would have had to locate wherever the entry into such relationships was possible. Poor transportation also may have promoted a dispersed rural distribution of some services, such as blacksmiths who worked on agricultural implements that were inconvenient or difficult to transport to town. The study of the ratio of craftsmen in towns as opposed to those in rural areas should be extended into later periods to determine when most nonagricultural functions were centralized in towns (as is the case now).

The distribution of specific activities (shops) among rural areas and towns is presented in Table 60 for 1850, when information on specific occupations is available. As noted above, most commercial activity was concentrated in towns, and there probably was even less rural commercial activity than is indicated in Table 60, since it is known that several merchants who were listed as rural residents had their stores in a nearby town. Most craft and manufacturing activities occurred in both towns and rural areas. A wool carder, a tobacco curer, a potter, a gunsmith, and two wheelwrights were located only in

TABLE 57.

Number and Percent of Households with Agricultural Occupations Only, Agricultural plus Nonagricultural Occupations, and Nonagricultural Occupations Only, in Rural Areas and Towns, in 1850

	Rural		Town		Total	
	Number	Percent	Number	Percent	Number	Percent
Agriculture only	743	87.2	21	13.0	764	75.3
Agriculture and nonagriculture	78	9.2	28	17.3	106	10.5
Nonagriculture only	31	3.6	113	69.7	144	14.2
Totals	852		162		1014	

TABLE 58.

**Number and Percent of Individuals with
Nonagricultural Occupations in Rural Areas
and Towns in 1840 and 1850 in the
Project Area**

	Rural		Town		Total
	Number	Percent	Number	Percent	
1840 ^a	160	51.6	150	48.4	310
1850	128	39.6	195	60.4	323

^aIncludes individuals living outside the project area.

rural areas. The wool carder and tobacco curer would be expected to be rural since they processed agricultural products. The tobacco curer lived on the farm of the largest tobacco producer. The potter, of course, was located near a clay source.

Of more interest are the activities found only in towns. With the exception of tailor shops, transportation facilities (stage and freight depots), and a cigar maker (located in Florida), all activities located only in towns were found only in Paris. Paris had most activities and services found in other towns plus more specialized services such as a drug store, a hatter, a brick mason, a silversmith, and a tinner. The hatter and silversmith may have provided items used mostly by wealthier members of the surrounding area, while the brick mason probably was constructing brick commercial buildings and residences for the more prosperous residents of Paris. Paris also was the only town in the project area with a hotel and a newspaper, both of which may have been supported partly by Paris' administrative functions (e.g., lodging at the hotel for people attending court sessions, and the printing of legal notices by the newspaper). More directly supported by county administrative functions were a full-time county official (the county clerk) and seven lawyers. The three lawyers who lived in rural areas were located near Paris.

TABLE 59.

**Number and Percent of Households with
Nonagricultural Activities in Rural Areas
and Towns in 1840 and 1850**

	Rural		Town		Total
	Number	Percent	Number	Percent	
1840 ^a	141	60.0	94	40.0	235
1850	109	43.6	141	56.4	250

^aIncludes households located outside the project area.

The above discussion of the distribution of nonagricultural activities in 1850 suggests that a hierarchy of functions was developing. Paris, at the top of the hierarchy, had administrative, commercial, and service functions. The service functions that distinguished Paris from lower order places were those supported indirectly by its administrative functions. Other service functions unique to Paris provided services to wealthier members of the community who filled most county offices and probably would have wanted to combine trips to town for administrative and business purposes. Lower-order towns or villages provided local commercial and service

TABLE 60.

**Distribution of Types of Shops among Towns and
Rural Areas in 1850**

Shop type	Rural	Town
Merchant	5	19
Druggist	0	1 ^a
Peddler	1	0
Mill	10	4
Blacksmith	12	10
Carpenter	18	10
Cabinet maker	2	7
Wagon maker	4	9
Cooper	7	4
Saddler	1	8
Shoe maker	3	3
Plasterer	2	2
Stone mason	2	1
Mechanic	1	1
Wheelwright	2	0
Gunsmith	1	0
Potter	1	0
Wool carder	1	0
Tobacco curer	1	0
Artist	1	0
Tailor	0	7
Transport	0	3
Brick mason	0	1 ^a
Hatter	0	1 ^a
Silversmith	0	1 ^a
Tinner	0	1 ^a
Printer	0	2 ^a
Cigar maker	0	1
Hotel	0	1 ^a
Doctor	10	12
Lawyer	3	7 ^a
Teacher	15	5
Minister	9	3
Engineer	1	1
County official	0	1 ^a

^aIn Paris only.

functions, and were distinguished from Paris by the lack of certain specialized service functions as well as a more restricted number of commercial establishments. These lower-order places functionally were distinct from rural areas only in terms of commercial functions, since most craft and service functions located in villages also were found dispersed in rural areas that generally lacked commercial functions. Although five rural merchants are listed in the 1850 census, their stores probably were located in towns.

SUMMARY

In this chapter, economic differentiation in the period of initial settlement (1818-1850) of the project area was investigated by studying the distribution of wealth among individuals and the degree of agricultural and nonagricultural specialization. It was found that major differences in the amount of wealth per individual were present from the beginning of settlement and that these differences probably represent the establishment of a status system based on land and slaves similar to that found in older parts of the upper South. Amount of wealth (especially slaves) brought into the region was more important than length of residence (persistence) in determining individual prosperity. Wealthy slave owners were engaged primarily in livestock and grain farming along the timber-prairie boundary, and probably were producing for market. Since they controlled most local political offices, they were responsible for the establishment and routing of roads that soon connected the project area with already established towns to the northeast (New London, Palmyra, and Hannibal) and the southwest (Fayette, Franklin, and Columbia). By

1840, most farmsteads were no more than 1.3 miles from a county road, which provided access to nearby (usually within six miles) grist mills, villages, and towns where specialized services and nonlocal commodities could be obtained.

It was found that economic specialization was prevalent in both agricultural and nonagricultural activities. Three agricultural complexes carried out in distinct environmental zones coexisted in the project area: (a) production of grazing animals (cattle, mules, sheep) and grain on the timber-prairie boundary; (b) production of forest-foraging animals (swine) and grain (primarily corn) on timbered moderate slopes; and (c) production of tobacco on high terraces. Although these farmers engaged in specialized agricultural production, they were by no means so specialized that they produced only a market commodity. The agricultural census indicates that all farms produced most agricultural products required for home consumption (subsistence), as well as greater quantities of one or more market commodities. With the exception of tobacco growers, the majority of market commodity producers produced market quantities of more than one product, so that diversification minimized the risks of overspecialization.

Although nonagricultural specialists were common in the project area, many of them lived with farmers and were dispersed in rural areas—a risk reduction strategy. By combining nonagricultural and agricultural activities in the same household, the risks involved in specializing only in a craft activity were minimized. By 1850, nonagricultural activities were organized spatially in a rudimentary hierarchy of functions. Although most of the same craft services were found in rural areas and lower-order central places (villages), rural areas usually lacked stores. Political administrative functions as well as more specialized craft services not found in villages, were located in the higher-order central place (Paris).

SUMMARY AND CONCLUSIONS

A review of the hypotheses proposed in Chapter 1 serves as a summary of the data analysis presented in previous chapters. This is followed by a discussion of the settlement system of the project area in terms of the spatial distribution of various functions that resulted from perception of the environment by family units who shared upper South cultural characteristics.

The first set of hypotheses concerns location of land purchases relative both to environmental zones and to each other. Hypothesis 1 states that preferred environmental zones for the first purchase by residents were timbered ridgetops, timbered moderate slopes, and the prairie edge (timber-prairie boundary). This was tested for first land entries (in some cases the first entry may not have been the first purchase if the first purchase was made from another individual rather than from the federal government) by means of a multiple regression program and was supported by the data. A fourth environmental zone, high terraces, was found to be associated with early entries. Hypothesis 2 stated that subsequent entries made by a resident were located in prairie and bottomland zones. This hypothesis is not supported. Central prairie and bottomland zones were avoided and subsequent entries were concentrated in the same zones as first entries. In addition, it was found that nonresidents and Eastern speculators attempted to follow strategies of land selection similar to those of residents. However, these entrants were less successful, probably due to lack of knowledge about the environment. Eastern speculators did buy central prairie land, but only when other large tracts of land in timber zones no longer were available.

An unexpected result of the analysis was that preferred environmental zones correlate with certain agricultural complexes. It was found that timber-prairie boundary locations were occupied by grazing-livestock and grain producers and that high terraces were associated with tobacco production. The timbered moderate slopes probably were occupied by general farmers whose market commodities probably consisted of swine (forest-foraging livestock) and corn or wheat. Thus, Jordan's (1964) theory that the timber-prairie boundary was the preferred zone for settlement should be modified (when applied to the project area) to read that it was the preferred zone for grazing-livestock producers. It appears that the kind of agriculture practiced was a major determinant of the kind of land selected for settlement.

Hypothesis 3 stated that clusters of related families with common religious affiliations or origins would be found. It also was suggested that clusters would be found along roads and that settlement density would be higher near towns (Hypothesis 4). Settlement clusters were found to be common during the earlier period of settlement, and many are apparent on the 1830 map of first entries (Figure 10). Small clusters usually were composed of households of brothers and brothers-in-law, while larger clusters were composed of several smaller kinship-based clusters that shared a common origin or the same religious affiliation. The largest clusters were composed of Catholics, who settled around a Catholic church. Social ties within these settlement clusters probably facilitated cooperative labor.

Most clusters seen on the 1830 map (Figure 10) were located near roads, although settlement was not constricted into a linear pattern by them. Settlement location cannot be explained by the location of roads, since in many cases settlement preceded them. While the original New London-Fayette road probably provided access to the southern part of the project area, promoting early settlement there, the Ely and Smith settlements were located north of this road and later roads were routed through them. In the 1830s, roads were routed to pass by existing houses but once established, the new road might have promoted further settlement along it. Thus, in some cases, roads facilitated settlement and in other cases the routes of roads were determined by preexisting settlements. Towns do not seem to have promoted denser settlement around them, with the possible exception of the area south of Paris (Figure 11). However, this area also was settled densely in 1830 (Figure 10), before Paris was founded.

Several hypotheses were proposed to address economic differentiation, as indicated by both agricultural and nonagricultural specialization. It was hypothesized that there was specialization in the production of agricultural market commodities by 1850 (Hypothesis 5). This hypothesis is supported, but specialization was primarily at the level of agricultural complexes (grain plus grazing-livestock and grain plus foraging-livestock) rather than at the level of specific commodities. The exception to this is tobacco, which in many cases was produced as a single market commodity or as a cash crop. However, only 11% of all farmers in the project area were growing tobacco in 1849. All farmers, wheth-

er they produced market commodities or not, probably produced enough various farm products to supply the needs of their family. Thus, most farming households were self-sufficient in most food products required for household consumption, and also may have produced one or more commodities for market exchange or sale.

Hypotheses concerned with nonagricultural specialization included several that dealt with towns. It was hypothesized that craft activities and commercial functions were concentrated in towns (Hypothesis 6). This was true for commercial functions but not for craft activities, which in 1840 were more numerous in rural areas than in towns. By 1850, slightly over half of all craft activities were located in towns. It also was hypothesized that towns were regularly spaced and that the county seat had more functions than other towns (hypotheses 6 and 7). This was confirmed by the presence of a hierarchy of functions. Towns were distinguished from rural areas by the presence of commercial functions, and the county seat was distinguished from other towns (villages) by the presence of more specialized craft and service functions, as well as by administrative functions.

It was suggested that towns formed at some minimum population threshold (Hypothesis 8). Lack of data from the years when towns were founded makes conclusions tentative. However, it is suggested that a minimum of 500 people within a 6-8-mile radius was required to support a town, given the level of demand for nonagricultural goods and services present in the area. The failure of the towns of Newport, Bloomfield, and Ralls Town were due in part to their location within the 6-8-mile radius of other established towns. The rapid development of roads within 10 years of the formation of Monroe County, as hypothesized in Chapter 1, does indicate that access to external markets was an early priority (Hypothesis 9).

Three hypotheses concerned with the distribution of wealth were proposed. Hypothesis 10 stated that wealth differences were present from the beginning of settlement and that they increased through time. It was found that the concentration of wealth in 1830 greatly exceeded the hypothesized 33%, since 47% of the wealth, in terms of land and slaves, was possessed by the richest 10%. Instead of an increase in the concentration of wealth, however, there was a decrease by 1850, when the richest 10% experienced a decrease in their share of the wealth from 47% to 40%. This decrease in the concentration of wealth between 1830 and 1850 can be explained partially by an increase in the proportion of landowners between 1830 and 1850. However, there also was an increase in amount or range of wealth between the richest and poorest resident of the project area between 1830 and 1850.

Previous studies suggest that there should be a

correlation between length of residence (persistence) and wealth (Hypothesis 11). However, little evidence of this was found, indicating that the most important determinant of wealth was the amount one brought into the area, rather than the amount earned there under frontier conditions. Hypothesis 12 suggested that local political offices were occupied by wealthier members of the project area. This was supported, especially for county judges (the highest position in county government), all of whom were members of the four highest (out of 10 possible) wealth ranks and all of whom owned slaves.

MODELS OF RURAL SETTLEMENT LOCATION

Results of the analysis used in Chapter 4 allow formulation of a model of rural settlement location for the period of initial entry. Analysis of settlement location for later periods was not performed, but some predictions of later patterns are presented below. Settlement location was conditioned by the type of agriculture a settler intended to practice and by social variables such as kinship, common origin, and religious affiliation. A settler entered land in the timber-prairie boundary zone if he was a stockman, in the timbered moderate slopes if he raised primarily corn and hogs, or in areas with large, high terraces if he grew tobacco. Combinations of these zones permitted diversification. Specific location within these zones was conditioned by pre-existing social relationships with settlers who had arrived earlier. However, as the area filled up, social variables probably had less effect, since the remaining good land might not be located next to someone with whom a social relationship existed. The amount of land entered was determined by a settler's wealth. Wealthier settlers usually were stockmen, who may have brought portable wealth in the form of slaves and livestock (in the absence of a stable currency) with them. In some cases, slaves probably were sold in order to enter land with the proceeds.

The specific model of rural settlement location for the project area, as summarized above, can be compared with the general model of rural settlement location proposed by Hudson (1969). Hudson describes changing spatial patterns of rural settlement in terms of three "processes" or phases of development derived from ecology: colonization, spread, and competition. Colonization is the initial stage of expansion by a population into a new area. Spread is the formation of new settlements through reproduction, which increases the population density and fills in empty spaces between original settlements (see Bylund 1960). Competition results when

the density of farms causes farm size to approach minimum economically feasible limits. Competition for land closest to one's farmstead results in less successful farmers being forced out, creating a more uniform (and larger) farm size.

Hudson associates each phase of rural settlement development with a particular spatial pattern in the distribution of farmsteads or farmhouse locations. Consideration of farmhouse locations allowed Hudson to reduce the problem to describing rural settlement in terms of patterns of points. The colonization phase is characterized by a random distribution of points, the spread phase produces a tendency toward a clustered distribution of points, and competition results in a regular spacing of points. Hudson was able to test only the competition phase of his model. He used farmhouse locations as shown on county atlases for areas of eastern Iowa with "little topographic influence" (Hudson 1969:37) at three points in time between 1870 and 1960 to show that a more regular distribution did form during that span of time in some of the study area.

In order to determine the spatial patterning of the Iowa farmhouses, Hudson presents several mathematical formulas. In the mathematical section, Hudson (1969:374) associates a clustered spatial pattern with a lack of competition for land (low density of settlement) and a varied biotope. A regular pattern is associated with (and probably caused by) competition. The major contribution of Hudson's model is the explanation of the change from a clustered pattern to a regular pattern, as increasing density promotes competition for land near each farmer's existing holding. However, Hudson does not develop a comprehensive explanation for forces that produce clustered or random distributions at lower densities. The causes of clustered or random patterns in any region are probably specific to that region, rather than general, being related to local cultural and physical environmental factors.

The specific model developed for the initial settlement of the project area explains the clustering evident on the 1830 map (Figure 10) in terms of physical environmental variables that concentrated settlement in certain preferred zones and in terms of social dimensions that produced clusters of settlers with kinship ties, common origins, or who shared the same religious affiliation. Spread had little effect in the region, since increasing density and filling in of spaces between clusters was due primarily to continued rapid immigration (colonization) rather than to later expansion by descendants of original settlers. Hudson (1969:370) acknowledges this possibility.

Evidence for the beginning of competition in the project area may be found in a decrease in number of 40-acre farms and the decrease in number of land owners by 1850. The 40-acre farm may not have been considered to be economically feasible and, if more land

could not be entered or purchased, the 40-acre tract was sold to an adjacent land owner. Competition may have coincided with colonization. However, farm size still varied widely (from 80 to 2000 acres) in 1850, so that the spatial pattern probably was random or clustered rather than regular.

As noted above, the competition phase is treated more fully by Hudson and was tested with data from Iowa for the period 1870-1960. Hudson proposed that as density increased, farmers would begin to compete for land close to their farmstead. Smaller farms would not be economically feasible and, as they were bought, the remaining farms would increase in size, density would decrease, and a regular pattern would emerge. Although Hudson proposes this as a general trend for rural settlement, it must be asked whether this trend was not a result of a specific technological change peculiar to midwestern prairie farming during the first half of the twentieth century: the mechanization of agriculture on level, open prairies. Would a regular pattern emerge in an area where mechanization did not occur and where different kinds of agriculture were practiced?

Although mapping of settlement in the project area was not carried beyond 1840, and statistical analysis was not extended beyond 1850, some suggestions about later trends in the project area can be made. Since it was located in the upper South, the presence of slavery created more differences in wealth and an unequal distribution of farm sizes, which competition may not have regularized entirely, even after the Civil War ended slavery. This was combined with environmental diversity and three different agricultural complexes that probably required different amounts of land, thereby contributing to the differences in farm sizes. Thus, greater wealth differences, a variety of agricultural complexes, and greater environmental diversity in the project area than in eastern Iowa may have operated against regularization of farm sizes in the Salt River region. This hypothesis could be tested by using maps presented here for 1830 and 1840, tax records (to reconstruct property ownership for the period 1850-1870), and county atlases that began in the late 1870s.

While Hudson discusses the patterns produced by colonization in general terms, data from the project area indicate that the specific patterns produced by colonization are a result of choices made by individuals, influenced by their perception of the environment in terms of both physical dimensions (e.g., topographic features, slope, vegetation, etc.) and social dimensions (e.g., proximity to kinsmen, persons with common origins, or persons with like religious affiliations). Perception of the environment is culturally conditioned and is dependent on previous experience; it cannot necessarily be predicted with an abstract or general model derived from plant ecology or based strictly upon

economic forces. Thus, causes of patterning for the colonization phase are culturally conditioned and tied to specific environmental characteristics. For the colonization phase, locally specific causes that vary from region to region probably have more effect than widely applicable general forces. The competition phase may be predictable more generally in terms of strictly economic forces of competition, but the effects of differing technologies and social environments also should be taken into account, as was suggested above.

DEMOCRACY AND SPECULATORS ON THE FRONTIER

At this point, some comments are needed on two problems with which historians have been concerned while studying the frontier in the United States. The first of these is the role of the frontier in promoting democracy, which is part of the Turner thesis. Curti (1959), who was one of the few historians to use quantitative data at the time of his study, tried to demonstrate that the frontier promoted democracy in Trempeleau County, Wisconsin. Curti (1959:1) defined democracy as

widespread participation in the making of decisions affecting the common life, the development of initiative and self-reliance, and equality of economic and cultural opportunity,

and concluded that the frontier promoted democracy in Trempeleau County because everyone could participate in township meetings which, among other things, established roads. Each township was represented in the county council by the chairman of its township board. Curti also found equality of "economic and cultural opportunity" in Trempeleau County because European immigrants were able to acquire the same amounts of land and to participate in cultural and political activities to the same extent as the native-born.

When the situation in Trempeleau County is compared with opportunities in the project area, it becomes evident that the political and social systems brought to the frontier from further east were more important in determining the degree of democracy (as defined by Curti) than were frontier conditions. If Curti had performed his study in a southern frontier county, he would have found that there was little opportunity for participation in local government because there were no township meetings or boards. Instead, political power was concentrated in the hands of three county judges who did not represent the townships, but who were members of a wealthy slave-owning upper class. This system of local government originated further east in the older southern states. If there were any European immigrants in southern frontier counties, they probably

never would have attained the wealth of slave owners or been accepted as members of the upper class. Owners of many slaves had an advantage on the southern frontier because they could sell slaves and buy large quantities of relatively inexpensive land with the proceeds. Frontiers did provide relatively inexpensive land, but this did not automatically promote democracy. The social and political organization brought to the frontier by the dominant immigrating group determined how the frontier would develop, "democratically" or otherwise. The differences between northern and southern frontier democracy already had been pointed out by Elkins and McKittrick (1954) when Curti (1959) published his study.

As mentioned in Chapter 1, various historians (Bogue 1963; Gates 1931, 1941, 1942; Swierenga 1968) have discussed the role of the land speculator in the development of the frontier. Some believe that absentee speculators retarded growth by withholding land that could have been settled by farmers; others emphasize the speculator's role in providing credit, which allowed people to buy land who did not have the cash to buy it from the federal government. This dispute can never be resolved in general terms, since the impact of absentee speculation varied from region to region, depending on local conditions.

Results from the project area indicate that one of the most significant local factors was the timing of periods of land speculation in relation to the beginning of settlement. In the project area settlement preceded the 1835-1836 period of land speculation, so that by the time Eastern speculators began buying land in the area, all the best land was gone. Speculators could buy only the timbered steep slopes and upland prairie areas that residents of the area had avoided. Thus, there are actually two important variables to consider with respect to absentee frontier land speculators: the timing of periods of speculation in relation to initial settlement of an area, and how well speculators or their agents were able to evaluate characteristics of the land they were purchasing. Since most studies of frontier land speculation have used data from northern frontier areas, the different social and economic conditions characteristic of southern frontiers also should be investigated with respect to absentee land speculation.

AN UPPER SOUTH PIONEER SETTLEMENT SYSTEM

The upper South cultural background shared by settlers of the project area was a major determinant of the resulting settlement system. Characteristics of upper South culture that were important to the formation of

the settlement system in the project area were (a) a diversified general farming complex; (b) a wood-oriented technology; (c) a social stratification system based on land and slaves; (d) the importance of the family as a cooperative labor unit; and (e) an oligarchic local political system directed by the county court.

The agricultural system characteristic of the upper South was based on corn, which was consumed by people as well as used to fatten hogs and other livestock. This corn and pork diet was supplemented by beef, potatoes, wheat bread, butter, and various vegetables such as peas, beans, okra, collards, cucumbers, squash, and turnips (Newton 1974:152). A wide variety of commodities was produced for market, some of which were the comestibles listed above, plus noncomestibles such as tobacco, hemp, flax, and mules. This diverse, flexible agricultural system allowed each family to be self-sufficient in most food requirements (except for imported staples such as sugar, salt, and coffee) and to produce a market commodity that allowed them to obtain imported staples and manufactured goods.

Residents of the Bluegrass region of Kentucky in the early nineteenth century were by no means isolated. They participated in an international trade system that brought in manufactured goods from England via Philadelphia and exported agricultural commodities to the South via the Ohio and Mississippi rivers. It is probable that they expected to participate in a similar system in Missouri as soon as possible. Data from the project area show that these expectations soon were fulfilled by rapid development of (a) roads connecting the project area with Mississippi River ports and (b) towns and villages that acted as redistribution points for incoming manufactured goods. The 1840 and 1850 agricultural censuses demonstrate that the typical upper South agricultural system was operating in the project area and that agricultural commodities were being produced for market at an early date.

The upper South wood-oriented technology acted to restrict settlement in the project area to timbered areas, and produced a remarkably similar series of log houses and frame I-houses. Available technology and labor (large families and slaves) made extensive forest agriculture the preferred technique. Large open prairies probably were not cultivated until the 1850s, when acceptance of a Northern technological innovation—the steel plow—made prairie tillage feasible.

The upper South social stratification system was based on ownership of large amounts of land and slaves. In the project area in 1850, most farmers owned less than 400 acres of land and had few or no slaves, but a wealthy minority owned 500 to 2000 acres each and had 8-35 slaves. This group controlled county government, since most county offices were held by wealthier residents of the area. This group was the one most interested in

establishing access to external markets, since they were the major livestock and grain producers. Their wealth probably made them more interested in obtaining imported manufactured goods.

The basic units in the settlement system were families that were organized as independent households possessing a farmstead surrounded by the head of the household's land. Families tended to be large and complex, consisting of a nuclear family of parents and children, several of whom might have been unmarried young adults. Married children of the household head with children of their own were present in some cases, as were aged parents of the household head. Households also contained more distant relatives or tenants on occasion, and many of them had slaves. In 1850 the average household size, including slaves, in the project area was 8.2 persons. Large households provided the labor necessary to establish a farm under frontier conditions. Although average household size increased between 1830 and 1850, the fertility ratio and the percentage of children under 10 years of age declined steadily.

Easterlin (1976) has proposed a model to account for this decline in fertility, which he observed in demographic studies of northern frontiers. As the availability of land decreases with continued in-migration, land values increase, which slows in-migration and fertility. This moderates the increase in land values and the cycle continues "until total population, fertility, net migration, and farm acreage values stabilize at a level commensurate with the area's potential" (Easterlin 1976:80). This model rests on the assumption of multigeniture (which probate records indicate was the most common form of inheritance in the project area) and the desire to provide land for all of one's children. As land values increase, the ability to acquire more land for more children decreases, tending to limit fertility. This model partially accounts for the tendency to enter as much land as possible. Even though an entrant did not intend to cultivate all of it (the percent of land "improved"¹ in 1850 was 34.5), large amounts of land were entered to pass on to children who, in a sense, "earned" it by contributing their labor as part of the household unit. This also accounts for the high frequency of unmarried young adults who remained in their parents' household. The independence of family units, each of which owned large amounts of land, produced the dispersed rural settlement pattern

¹Improved land was defined as "cleared and used for grazing, grass, or tillage, or which is now fallow" (Wright and Hunt 1900:23).

seen in Figures 10 and 11. However, some clustering within this dispersed pattern is evident, especially in Figure 10. This clustering was the result of kinship ties, usually among brothers, each of whom was able to set up an independent household and farm because of the availability of relatively inexpensive land at the beginning of settlement in the area. Rothstein's (1975:588) observation that "the number of acres one owned bore slight relationship to one's capacity for using them in farm production" is applicable to the project area, where an upper South status system based on land ownership, the desire to bequeath land to all of one's children, and an extensive form of agriculture, led to a pattern of large tracts of land surrounding independent dispersed farmsteads. Surplus acreage probably was used for grazing, and for providing fuel, building materials, game, and salable products such as maple sugar (Rothstein 1975:588).

The final important upper South characteristic that shaped development of the project area was a system of local government that centered political power in the county court at the expense of local representation at the township level (Elkins and McKittrick 1954:573). Positions on the county court were filled by members of a wealthy elite of landed slave-owning "gentry," who in the project area primarily were stockmen. This system of centralized county government was largely responsible for the system of towns and roads that developed. The dominance of Paris, the county seat, was partially the result of a lack of administrative functions at the township level, since there were no township meetings or other political functions to attract people to other towns. The other towns had to rely only on their function as commercial redistribution points, since Paris controlled most administrative functions, while craft and manufacturing functions were located in rural areas as well as in towns.

The rapid development of a road system connecting the project area with external market towns and connecting smaller towns within the project area is attributable to the power of the county court to make and enforce decisions about roads throughout the county, without having to wait for a consensus to be reached in several township meetings, as was the case in many northern counties (see Curti [1959] for a discussion of road establishment in Trempealeau County, Wisconsin). Since members of the county court were among the wealthiest individuals in the county, and were producing livestock for market, rapid development of a county road system connecting the project area to external markets is not surprising.

It is apparent that settlers followed several risk-reduction strategies in order to cope with new environmental and economic conditions. A primary strategy was to make the farm produce enough to provide for

consumption requirements of all family members. Self-sufficiency made it possible to increase production of one or more commodities to a level where profits could be realized from sale or exchange. Risk was minimized at this level by producing more than one market commodity. This is especially evident among livestock producers, who usually produced several kinds of livestock, rather than specializing in only one. During later periods further west, there were specialized cattle and sheep producers who competed for grazing land. This was not the case in the project area, since many stockmen raised both cattle and sheep. Thus, risk was minimized by producing several market commodities in the hope that at least one of them would produce high yields and be in demand in the market. If a profit could not be made on any of the commodities produced for market, the family would not starve because of the wide variety of food items produced by the farm for home consumption. For nonagricultural specialists a popular risk-reduction strategy was to locate in a household that also contained farmers, so that access to food was guaranteed, even if there was no demand for the specialist's services.

These risk reduction strategies help explain the degree of agricultural specialization (at the level of "complexes" rather than that of individual crops) and the dispersed nature of much of the nonagricultural specialization. Rural nonagricultural activities also may have been part-time, performed in conjunction with agricultural activities. These strategies may be characteristic of many frontier situations where population density is low, transportation is poorly developed, and major market centers are distant.

Another example of risk reduction strategies is provided by the differences between Salt River and Jackson townships in 1830. The lower percentage of slave owners in Jackson Township in the western part of the project area may have been due to its relative inaccessibility, where the nearest town was over 25 miles away and where few roads existed. Wealthy slave owners may not have been willing to risk settling in an undeveloped area far from towns and external markets. The western part of the project area before 1831 probably was the only time and place where self-sufficiency and little participation in outside markets existed. The 10-year period of underdevelopment for the western portion, from 1820-1830, probably would have been much shorter had the depression of the early 1820s not intervened. Increasing immigration in the late 1820s and the creation of Monroe County in 1831 ended the isolation of the western part of the project area, and "when the storekeeper appeared and as transportation improved, self-sufficiency melted away" (Loehr 1952:41).

The settlement system existing in the project area in 1840 and 1850 has been described in terms of the spatial

distribution of functional agricultural and nonagricultural units (farmsteads, craft specialists, mills, and towns). Some of the processes that produced this system, such as settlers' adaptation of their upper South cultural background to the environment of the region and risk reduction strategies, have been discussed above.

The results summarized here demonstrate how quantitative written sources (which provide similar data on all members of the population) can be used statistically to study historical settlement systems. It is only through the tedious analysis of detailed quantitative data pertaining to concrete cases in specific areas that progress in understanding the development of settlement systems

will be made, as Reyes (1977:2) has demonstrated for late prehispanic Mexico. Generalizations based on opinion and selected narrative sources may produce useful hypotheses about frontier settlement, but these hypotheses must be tested with concrete data from many regions. The present study represents one such attempt. It is hoped that it will serve to stimulate others to implement studies of this sort in other areas. Eventually it may be possible to determine what characteristics of settlement are specific to the project area, are characteristic of all upper South frontiers, or are generally found in all frontier settlements.

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COUNTY RECORDS CITED

- MCCR Monroe County court records (office of the county clerk, Paris, Missouri).
- MCCCR Monroe County circuit court records (office of the circuit clerk and recorder of deeds, Paris, Missouri).
- MCDR Monroe County deed records (office of the circuit clerk and recorder of deeds, Paris, Missouri).
- MCPBOE Monroe County plat book of original entries (office of the circuit clerk and recorder of deeds, Paris, Missouri).
- MCPR Monroe County probate records (office of the probate judge, Paris, Missouri).
- RCCCR Ralls County circuit court records (office of the circuit clerk and recorder of deeds, New London, Missouri).
- RCDR Ralls County deed records (office of the circuit clerk and recorder of deeds, New London, Missouri).
- RCPBOE Ralls County plat book of original entries (office of the circuit clerk and recorder of deeds, New London, Missouri).
- RCRR Ralls County road records (office of the county clerk, New London, Missouri).

OTHER COUNTY RECORDS CONSULTED

Monroe County marriage records (office of the circuit clerk and recorder of deeds, Paris, Missouri).

Ralls County marriage records (office of the circuit clerk and recorder of deeds, New London, Missouri).

Ralls County poll books, 1822-1828 (office of the county clerk, New London, Missouri).

Ralls County probate records (office of the probate judge, New London, Missouri).

Ralls County tax records, 1851 (office of the collector, New London, Missouri).